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ABSTRACT

A description of Project Talent includes discussions of preceding research indicating that acceleration was effective and beneficial and outlines provisions utilized for acceleration (early admission, ungraded primary and elementary, individual and advanced placement, grade skipping, combination grades, and time compression). Detailed are the administrative procedures involving the advantages and problems of the program and the establishment of new programs, and the identification and placement of pupils in connection with the role of psychologists, counselors, and psychometrists, plus the counseling of pupils, parents, and teachers. The curriculum for the grade 3 summer session, with its goals, content, organization, and evaluation is provided. Functions and selections of case studies as used in the process of identification, and the study of intellectual development of the accelerate are discussed along with counseling methods. Evaluations are presented of the California Project Talent program, Pasadena's acceleration program, the Ravenswood program, and the placement of individuals in the California program. Also included are eight recommendations for the future, research suggestions, appendixes, and tables of results. (JM)

PROJECT TALENT
III
CALIFORNIA

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acceleration

Programs for Intellectually Gifted Pupils

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acceleration
Programs for Intellectually Gifted Pupils

Prepared for
California Project Talent
State Department of Education

By

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Foreword

Every child should have the opportunity to acquire a sound basic education, and the structure of the opportunity should be sufficiently flexible to permit the child to learn at the rate and to the full level that his ability permits. Responsibility for providing this opportunity rests primarily with the public schools.

In addition to having this opportunity, every child should be helped to understand himself and to know his abilities, and he should be counseled regarding how he can utilize his abilities to the best advantage. Responsibility for providing this help is a major responsibility of the schools, but it is also a responsibility that must be shared by the home.

Ways in which the schools can meet these responsibilities, especially with gifted children, have been well defined by California Project Talent. And in addition, Project Talent has demonstrated ways in which acceleration programs of high caliber can be developed and operated successfully.

This publication contains a report of Project Talent regarding its findings in conducting an acceleration program for gifted children and recommendations regarding how similar programs may be developed and conducted by California school districts. Every school administrator and other professional educators should profit from studying the information and ideas presented.

Max Rafferty

Superintendent of Public Instruction

CALIFORNIA
TODAY

During the summer school experience, the pupils participate in enriched work involving science, social sciences, and skills areas.

Preface

Acceleration, counseling, enrichment, and special classes were the areas of emphasis chosen for four prototype programs that were recently tested in an effort to provide bases for effectively strengthening and augmenting the education of gifted children. The programs were planned, developed, and given their trial runs by the staff of California Project Talent and were supported by funds from the Cooperative Research Program of the Office of Education, U. S. Department of Health, Education, and Welfare.

This publication--the third in a series--has to do with one of the four programs. Its contents describe a unique form of acceleration called individual placement, which utilizes the summer school to advance academically talented pupils to higher grade levels while assuring continuity in the sequential educational experiences of these children.

Any acceleration program places greater than usual diagnostic burdens upon the school district planning to advance pupils above their chronologically appropriate grade levels. The decision to accelerate a child's education must be based upon a wide array of personal, social, and academic data. Therefore, any formula for an acceleration program should include case-study techniques that are ample enough to allow for exhaustive observations of a potential accelerant's emotional, social, and academic backgrounds. This publication not only contains useful forms for purposes of selection and case study but also presents reports of actual findings in regard to pupils whose acceleration varied in degrees of adjustment.

After selecting pupils during the time they spend in the second grade, the teacher is encouraged to emphasize skills usually mastered at the third grade and at higher levels. The accelerants are then placed in a specially designed summer session which is built around a carefully guided curriculum. During the summer school experience, the pupils participate in enriched work involving science, social sciences, and skills areas. Special attention is paid to any proficiencies that reveal individual problems; for example, reading, mathematics, or cursive writing skills are sometimes found to be relatively weak in the performance of certain gifted pupils.

After actual acceleration to the fourth grade has been accomplished, the pupils' progress must be checked periodically. Opportunities for special tutoring, counseling, or independent placement in other classrooms should be available. Accordingly, this individual placement (acceleration) program combines thorough pupil personnel and follow-up practices with unique curriculum offerings.

This publication may be used as a workbook for the establishment of acceleration-type programs in school districts. Users need not be bound to the exact structure of the program highlighted here. To illustrate varying efforts in the field: Some districts have successfully experimented with substitute summer school programs at differing grade levels; others have evolved systems for the differential diagnosis of potential accelerants and have offered complete acceleration without summer school attendance; some have established partial advanced placement; others have given advanced work to pupils while retaining them in their chronological grades. Those sections in this publication that review the research and the literature on improving the education of gifted children should help school districts to design an acceleration program uniquely suited to the needs of their pupils.

The Pasadena City Unified School District and the Ravenswood City Elementary School District served as demonstration centers for the development of individual placement programs. Other districts, such as Fresno City Unified, Arcata Elementary, Reed Union Elementary, Cypress Elementary, and McKinleyville Union Elementary school districts, have initiated similar programs based upon the California Project Talent guidelines contained in this publication. Thus, the program has already shown considerable flexibility for adaptation to school districts of varying size, location, and need.

Among the many professional educators contributing to the successful development of the individual placement project are Cecil Levin and Vivian Sherman, former education research project consultants; E. Howard Floyd, Assistant Superintendent, and Mrs. Billie Press and Mrs. Eugenia Bernthal, consultants for programs for gifted children, Pasadena City Unified School District; and Philip Smith, Assistant Superintendent, Ravenswood City Elementary School District.

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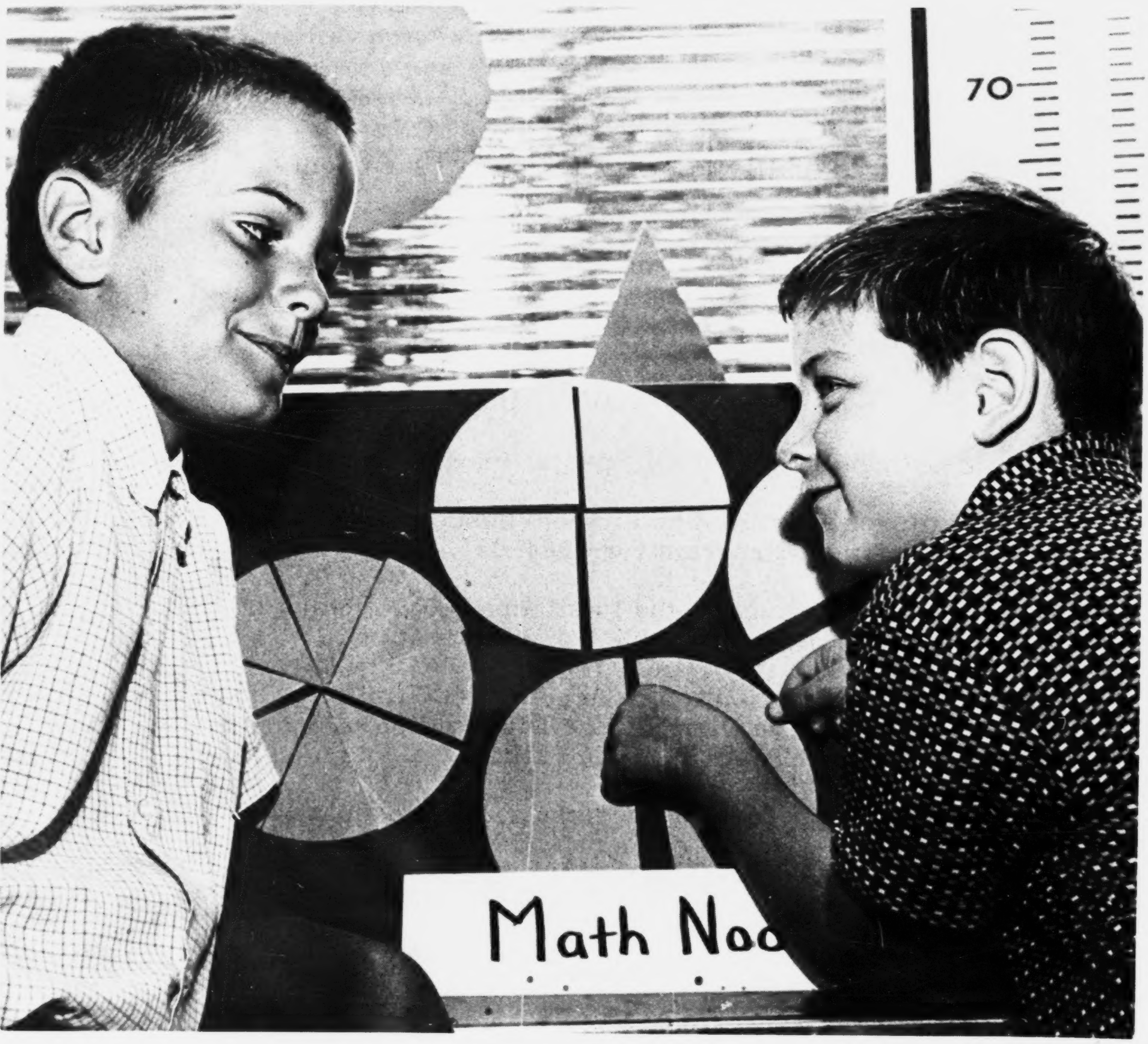
Acceleration is made possible by providing opportunity for gifted pupils to complete the education program at a more rapid rate than participation in the regular classroom program permits. Photo by Ken Yimm.



Project Description and Report Summary

California Project Talent was initiated in 1963 as a demonstration and field study of differential programs for the education of gifted pupils in grades one through nine. Funded by the Cooperative Research Branch of the United States Office of Education and directed by the California State Department of Education, the project was designed to demonstrate and evaluate four program prototypes: enrichment, acceleration, counseling-instructional, and special classes.

This publication, which is the final report of the acceleration portion of the project, has three purposes:

1. To provide guidelines for the development or the extension of a prototype program for mentally gifted children that involves identification by the second grade, a special summer program in lieu of third grade, and placement in the fourth grade the following semester
2. To disseminate the results of demonstration center studies on acceleration to educators who have special interests in instruction at the elementary and secondary levels
3. To report the acceleration phase of California Project Talent (Project #D-072) to the Cooperative Research Branch of the United States Office of Education, Department of Health, Education, and Welfare

The chapters in this publication include a description of the project and a summarized report, background research which preceded the project, administrative procedure for the initiation of acceleration programs, identification and nomination of candidates, guidance and counseling, curricula for the special summer session, case studies of accelerates, evaluation of student achievement and adjustment, and recommendations.

This publication contains a report of the findings of the study of programs that permit accelerated pupil advancement in school. In the programs and administrative plans that are commonly employed, acceleration is made possible by providing opportunity for gifted pupils to complete the education program at a more rapid rate than participation in the regular classroom program permits; this may be accomplished by permitting these pupils to skip certain parts of the educational program offered at the various levels or by introducing the curriculum content to them earlier and more rapidly than usual so that their pace is increased in specific subject areas. In the acceleration phase of California Project Talent, emphasis was placed upon programs and program adjustments designed for earlier and more rapid introduction of curriculum content than standard grade guidelines suggest. Demonstration centers for acceleration programs were established in the Pasadena City Unified School District and the Ravenswood City Elementary School District.

Individual placement is a special form of acceleration that advances the academically talented child in grade placement while assuring continuity in his educational program. As developed in California, the plan provided early identification, enrichment at second grade level, a special summer program in lieu of third grade, and advanced placement in fourth grade. However, as the program advanced, individual placement in the demonstration programs came to mean the assignment of each identified gifted pupil to a program of acceleration or enrichment, whichever was best suited to his needs at the time.

Several program alternates for acceleration--from early entrance into school to advanced placement into college programs--are described in Chapter 2. The research on acceleration is categorized as comparative, longitudinal, experimental, and evaluative. The comparisons between accelerates and nonaccelerates reported by Miller, Mirman, Heer, Keys, Birch, and Worcester indicate generally superior school achievement by accelerates whether the comparison groups were older peers in the same grades or controls who had not been accelerated. The longitudinal studies of Terman and of Hobson show that accelerated students continue to improve their relative standing academically as they proceed through the grades. Terman found some maladjustment in individual cases, which usually was temporary and did not appear as a disadvantage in the social, professional, or marital ratings of adult groups. The experimental research of Klausmeier and Ripple became the rationale for the acceleration prototype which was implemented, demonstrated, and evaluated in California Project Talent. Evaluation studies by Martinson and Ivey show statistically significant gains on the part of accelerates over children not accelerated, including social status factors.

The administrative procedures that were found in California to facilitate new programs in acceleration are summarized in Chapter 3. One of the problems associated with this program is the early identification and school acceleration of the child prior to the time when his need for this kind of adjustment becomes urgent. The typical accelerate requires an enrichment program before acceleration and again within the year after his advanced placement. With careful administrative planning, excess-cost reimbursements (in California) can be used to provide partly for identification and evaluation, inservice education for selected teachers, and the special materials needed for a continuous enrichment program. Guidelines are indicated for the preparation of a handbook for elementary school principals. Some additional problems to consider in the planning stages are community acceptance, testing and counseling services, and evaluation procedures. Most potential difficulties can be anticipated and prevented wherever acceleration programs are launched.

The aspects of acceleration programs that require the specialized services of pupil personnel or guidance staff members are outlined in Chapter 4. Variants of the procedures for nomination and identification are described as these steps evolved in the demonstration centers in Pasadena City Unified School District and Ravenswood City Elementary School District. Both districts identified their gifted children of 130 IQ or above and then applied additional criteria of social and emotional maturity for the selection of accelerates. Identification data for the Ravenswood District over a three-year period is summarized. The crucial periods when counseling assistance should be available are (1) the time of identification; (2) the special summer session; and (3) the weeks following acceleration to the fourth grade. John A. R. Wilson, Associate Professor of Education, University of California, Santa Barbara, contributes a section on counseling the children, their parents, and their teachers.

Curriculum for the special summer session, which in California Project Talent was substituted for the regular third grade, is described in Chapter 5. This feature of the prototype program enabled bright children to be accelerated without experiencing the disadvantages of grade skipping and helped to alleviate parental apprehensions. The major curricular goals were to provide an orderly transition to work at the fourth-grade level, to involve children in higher intellectual processes than they might encounter in regular classes, and to develop creative talents. Examples of the implementation of the Bloom taxonomy and the Guilford structure of intellect are included. Enrichment through unit teaching of social science and science contents comprised about half of the summer programs. Individualized instruction in reading, spelling, handwriting, and mathematics was also recommended for these children. Quotations from the reports of the special teachers indicate the extreme variability in interests and school preparation found in pupils attending the summer session. Gifted children as groups were observed to attain independence rapidly and to accept responsibility eagerly for their own acquisition of factual information. Much of the teacher's time was given to specialized instruction of the children's identified weaknesses, to the development of library and study skills, and to individual projects. Mrs. Sally Patton's work in United States Indian Life and Mrs. Pauline Ahlemann's unit on embryology are outlined. The observations of the professional participants and consultants are used to evaluate the organization and accomplishments of the summer session in terms of the initial purposes.

Examples of case studies of accelerates which illustrate the distinct functions of the case study are presented in Chapter 6. The case-study format was devised by the staff for use in the project and was intended to serve the purposes of identification, instruction, and counseling. The process of identification, a summary of identification data for the Ravenswood City Elementary School District over a three-year period, and the original data which had led to the nomination and acceleration of a student are presented in the chapter. The use of case studies for purposes of intellectual development in children is explained, the teacher's appraisals of intellectual functioning characteristics in all 31 of the Ravenswood accelerates are summarized, and the case-history data on the intellectual development of one student are provided. An illustration of the use of case study for counseling was selected from a girl's files, and a description is given of the counseling program which involved her group of accelerates. The names of the children, their teachers, and their schools were changed. Some tentative recommendations based on case studies for the subsequent operation of acceleration programs in the schools are also given.

The difficulties of evaluating any program such as those in the demonstration centers are identified in Chapter 7, and the specific procedures and results of the studies devised are outlined in this chapter.

Problems in the adaptation of fact-finding or objective evaluation procedures by school district personnel for their own programs typically include the following: (1) expenditure of funds for a small group of students; (2) sensitivity of the adults involved; (3) lack of control subjects; (4) lack of facilities; (5) lack of research personnel; (6) lack of instruments; (7) lack of calendar time; and (8) individualized application of the curricular framework.

In spite of the difficulties cited, evaluations of the progress of all accelerates were undertaken in the demonstration centers and are reported fully as examples of studies which are feasible within school districts. Pasadena's evaluation procedures are illustrative of the potential approach when the district is large and data processing facilities are available. In addition to comparing accelerates with their older grade peers on standardized achievement tests, surveys of the teachers and parents were conducted to determine performance in the classroom, indications of personal adjustment, and other factors of development. Ravenswood used the child study approach and included a comparison of the performance of accelerates on standardized ability and achievement tests with district norms on the same tests. A summary of evaluation data from the project as a whole indicates that nearly all subjects appeared to enjoy a more suitable placement after acceleration--when suitability was based on academic achievement and professional judgments--than if the student had remained at his regular grade level.

In Chapter 8 the following principles of operation are postulated--generalizations derived from limited data-based observations, reviews of previous research, and confirming experiences in both demonstration centers:

1. Appropriate screening is the key to successful placement in acceleration programs.

2. Prior to advanced placement, candidates for acceleration should have mastered all important academic skills for beginning work in the next grade.

3. Intellectual differences between accelerates resulted in a wide range of individual abilities within the special summer classes and in the gifted cluster groups.

4. Variability within individual accelerates was apparent in tests of intellectual functioning and in classroom behavior.

5. Administrative procedures that accomplish acceptance of gifted children and of the acceleration program within the school community are essential.

6. The student's need for counseling at the time he enters the fourth grade can be anticipated.

7. A period of time prior to acceleration is needed when the child's functioning in the classroom can be observed and appraised.

8. Most accelerates do extremely well in school; they are a credit to their parents and their teachers; their placement is more suited to their social and academic levels than in any feasible placement with age peers.

A summary of evaluation data from the project as a whole indicated that nearly all subjects appeared to enjoy a more suitable placement after acceleration -- when suitability was based on academic achievement and professional judgments -- than if the student had remained at his regular grade level.

Literature and available research pertaining to the different types of programs designed to provide gifted pupils opportunity to take full advantage of their talents were studied long before California Project Talent was introduced into the classroom.

Research Preceding the Project

Early in the planning stage of California Project Talent, study was made of the literature and research pertaining to the different types of programs and administrative adjustments that had been or were being employed to provide gifted pupils opportunity to take full advantage of their talents. As a result of this study, it was determined that many of the provisions employed to provide gifted pupils opportunity to utilize their talents were designed to permit rapid completion of the school program and thus to shorten the time the pupils had to spend in the various phases of the program. These provisions were considered as forming a prototype acceleration program.

Types of Provisions Employed for Acceleration

Any provision that permits a pupil to complete the educational program for any level more rapidly than is generally permitted is a provision for acceleration. The provisions employed for acceleration are known as (1) early admission; (2) ungraded primary; (3) ungraded elementary; (4) individual placement; (5) advanced placement; (6) grade skipping; (7) combination grades; and (8) time compression. Each of these provisions has certain features that merit consideration.

Early Admission

In California, the legal age for admission to kindergarten is four years and nine months, and no provision is made for children to be admitted before they reach this age. The legal age for admission to first grade is five years and nine months, but provision is made for earlier admission to first grade when children in the kindergarten evidence ability to profit from participation in the advanced program and to do the required work successfully.

This provision has many advantages. First of all, every child has equal opportunity to evidence his ability and therefore to be given the advantage of advanced placement. Secondly, each child has opportunity to become adjusted to the school situation before he is evaluated. And thirdly, the child's teacher and the other members of the professional staff have adequate time to make the analysis needed to determine whether a child has the maturity and ability he needs to profit from advanced placement.

Ungraded Primary

In the ungraded primary plan, pupils work in cluster groups in each curricular area. Membership in each of these groups is determined by the pupil's maturity, achievement ability, social and emotional needs, and work habits. And the membership of each group is subject to constant change since the plan is devised to permit each pupil to progress at his own rate in each curricular area. Briefly stated, provision is made for acceleration if and when a pupil evidences ability to profit from the provision.

The ungraded primary plan offers opportunity for pupils with superior ability to progress rapidly and without missing any of the basic phases of the curriculum. In fact, it permits them to progress at a sufficiently high rate to complete the primary program in two years and to enter the program for the next level at the beginning of their third year in school. And this program provides for all other pupils the opportunities they need to complete each curricular area of the primary program at rates commensurate with their abilities and to enjoy the success in school to which they are entitled.

One feature of this plan is that in all instances the pupils' programs are complete in that no steps are skipped, and enrichment of their learning experiences is constantly stressed. A second and outstanding feature of the program is that provision is made for continuous evaluation of each pupil's intellectual, physical, and emotional needs, and the essential steps may be readily taken to meet these needs.

Ungraded Elementary

The ungraded elementary plan operates along the same lines as the ungraded primary plan but extends throughout the elementary school program. In all instances the program is highly individualized. Each pupil is permitted to progress at the rate his ability permits, and instruction is adapted to meet each pupil's needs, whether he is a gifted, average, or slow learner. This plan has the same features as the ungraded primary plan; in addition, it has the additional feature that special attention may be given to making certain that every pupil who has reached the point in the program where he will enter the upper grades or junior high school program has the emotional stability, physical fitness, and academic preparation required for success in the advanced program.

Individual Placement

Individual placement is a plan of acceleration that is designed to advance the academically talented pupil in the educational program and in doing so to ensure for him the same continuity of learning experiences he would have had if he had not been advanced. The individual placement plan employed in California Project Talent provided for early identification of the academically talented pupil who would likely profit from advanced placement, enrichment of the pupil's second grade program, and the provision of special learning opportunity for the pupil in a summer session in lieu of participation in the program for the third grade. These provisions prepared the pupil for advanced placement in grade four and thus accelerated his school progress one year.

The decision to accelerate the pupil's progress at this point was reached on the basis that both research and experience make it apparent that the pupil would make the required social and academic adjustments more readily and with greater ease at an early point in the elementary school program than he could at a later point. And in making one adjustment early in the program, it is wholly possible that he may be in position for another advanced placement at a later point in the educational program--perhaps advancement from grade five to grade seven.

Advanced Placement

Advanced placement provides gifted high school students the opportunity to complete courses for which they receive college credit, and they may use these credits in meeting the requirements for baccalaureate degrees. This provision is made in different ways and may involve participation in advanced study, supervised research, or special work in the classroom. Certain of the provisions may be made on college campuses; others, in high schools. In California, state reimbursement is provided school districts for certain of the excess costs of advanced placement programs for gifted high school students.

Grade Skipping

Despite the many known disadvantages of skipping a grade, pupils who have been advanced in this way apparently have not been harmed by the experience. One reason why these pupils have not been harmed may be that the teachers who recommended them provided, through individualized instruction, much of the content that these pupils otherwise might have missed. It should be noted, however, that most professional educators think that gifted pupils should have the advantage of provisions for acceleration that offer better opportunities than grade skipping.

Combination Grades

Provision for gifted pupils to advance through the school program at an accelerated rate may be made to advantage by having two grades in one classroom. Gifted pupils in the lower of the two grades may be given opportunity to work with pupils in the upper grade in any subject whenever they evidence ability to do so.

Time Compression

The time compression plan is designed to provide gifted junior and senior high school students opportunity to complete their educational programs in fewer years than would be possible if they were required to follow the regular schedule. In fact, certain gifted students may complete the required programs in one or two years less than they could when no provision such as the time compression plan is employed.

Research on Acceleration

Research on acceleration programs usually is one of four types: (1) comparisons of accelerates and nonaccelerates in a given population; (2) longitudinal studies of intellectually superior individuals; (3) experimental research involving controls; and (4) evaluation of pupil achievement or growth as a test of the effectiveness of a program. The studies reviewed in the following paragraphs varied in complexity, population, and purpose; therefore, the results are not equally applicable to the California prototype of acceleration. However, the conclusions drawn by the investigators were data-based, and they were reported in professional publications. Together, these studies form the backdrop for the acceleration demonstration in California Project Talent.

Comparisons of Accelerates and Nonaccelerates

Miller studied elementary children in the Evanston, Illinois, schools who were six months or more younger than the average of their classmates.[1] Several objective techniques--including measures of reading and general achievement and rating scales for social adjustment--were used to evaluate these pupils. In general, the younger children were found to be equal or superior to their older classmates.

Mirman studied 128 paired high school seniors, half of whom had been double promoted during the elementary grades while the other half had made the conventional grade by grade progress.[2] All students had IQs recorded at 120 or above; however, none of the students was considered "precocious." Mirman attempted to assess not only the performance of this group but also their attitudes and their parents' attitudes toward acceleration. Mirman concluded that acceleration could be used more widely. In his group, the girls did not encounter as many problems as did the boys and seemed not to mind being younger.

Herr studied the senior high school achievement of 197 junior high school accelerants. When compared with control groups, they did as well as nonaccelerated peers or surpassed them on all academic variables.[3] Keys studied two groups: One consisting of Oakland High School accelerants, the other consisting of underage students entering the University of California. Both studies indicated achievement favoring acceleration.[4]

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[1] Vera V. Miller, "Academic Achievement and Social Adjustment of Children Young for Their Grade Placement," The Elementary School Journal, LVII (February, 1957), 257-63.

[2] Norman Mirman, "Are Accelerated Students Socially Maladjusted?" The Elementary School Journal, LXII (February, 1962), 273-76.

Studies of children who were accelerated through early admission to first grade include an analysis by Birch of the school adjustment of 43 mentally advanced children. Over a three-year period, he found the overwhelming majority were making satisfactory or better adjustment in academic, emotional, and physical growth.[5]

Worcester reported a series of studies in which children of superior mental ability were admitted to kindergarten an average of eight months earlier than is normal.[6] When compared with older grade peers (first to fifth grades), this group of 175 early entrants generally received equal or higher ratings in social and emotional adjustment as well as in school marks. Another group of early entrants were studied at the primary level and were found to be as advanced as older peers--physically, socially, and mentally. Over 4,000 children were compared on achievement, health, coordination, peer acceptance, leadership, emotional adjustment, and liking for school with a smaller group of children who had been approved but who had not entered the early admission program. Investigators found no evidence to suggest that the control group had benefited from waiting. Worcester concluded that the children who qualified and were admitted early had gained a year without loss in social adjustment.

Longitudinal Studies

Best known of the longitudinal studies were those of Terman who followed over 1,000 gifted children (140 IQ or higher) into adulthood.[7] In his chapter, "The Problem of School Acceleration," data were presented and interpreted that showed a statistically reliable tendency for men accelerants to maintain an early superiority over nonaccelerated males on intelligence tests. Educational histories indicated that men accelerants--although 2.5 years younger than nonaccelerants--were more likely to stay in school through college and graduate school, to accumulate higher grade point averages, and to receive honors at graduation. Terman pointed out that the relationship was not necessarily causal. Boys who were accelerated were more likely to choose the professions and were more likely to become highly successful in their chosen vocations. No significant differences appeared in avocational interests between the various groups. In the case of women, no significant relation appeared between acceleration and occupational status.

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[3] William A. Herr, "Junior High School Accelerants and Their Peers in Senior High School: Scholastic Achievement," School Review, XLV (March, 1937), 186-95.

[4] Noel Keys, The Underage Student in High School and College. Berkeley: University of California Press, 1938, pp. 145-272.

[5] Jack W. Birch, "Early School Admission for Mentally Advanced Children," Exceptional Children, XXI (December, 1954), 84-87.

[6] Dean A. Worcester, The Education of Children of Above-Average Mentality. Lincoln, Neb.: University of Nebraska Press, 1956.

[7] The Gifted Child Grows Up, Vol. IV of Genetic Studies of Genius. Edited by Lewis M. Terman and Melita H. Oden. Palo Alto, Calif.: Stanford University Press, 1947, pp. 264-81.

Terman studied social adjustment indices obtained from self-ratings, parent interviews, preferred age of companions, extracurricular activities in high school and college, and ratings by field workers. Although the field worker's adjustment ratings favored the accelerants among the males, the subjects themselves were more likely to express the disadvantages. Sex differences in physical and social maturation favored the girls. Terman stressed the importance of considering each child as a special case. "Maladjustment does result in individual cases, but our data indicate that in a majority of subjects the maladjustment consists of a temporary feeling of inferiority which is later overcome," said Terman. Neither the marriage rate nor the test of marital happiness was different for accelerants and nonaccelerants.

Hobson followed 550 children who entered school as bright, underage pupils through periodic studies at the college level.[8] His subjects continued to improve their relative academic standing through school. They took part in significantly more extracurricular activities and were no different from their classmates in elective positions or in athletic and social achievement. They were admitted to college in significantly greater proportions than their older grade peers.

Experimental Research

Although the line may be extremely fine between the Klausmeier type of research and some of the studies reported in other categories as comparative or longitudinal studies, the Klausmeier work appears to be unique in his prearrangement of experimental and control groups on a chance basis. The eligible accelerates were identified and then assigned empirically to the experimental program or to the first of five control groups; this move ruled out possible selective factors in voluntary acceleration. The positive and impressive results of this research influenced the Rice and Plowman design for acceleration by individual placement in California Project Talent.

Klausmeier and Ripple identified their acceleration candidates at the second-grade level, gave them a special summer program of five weeks' duration, and accelerated them to fourth grade the following fall. Those accelerated had IQs above 115 (Kuhlmann-Anderson) and were in the older half of the class.[9]

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[8] J. R. Hobson, "Mental Age as a Workable Criterion for School Admission," The Elementary School Journal, XLVIII (February, 1948), 312-21.

In their extensive studies, several analyses of variance were used to compare the experimental group and six control groups on nine different measuring instruments, or variables. Types of data included achievement, attitude toward school, problem-solving ability, ethical values, handwriting, psychomotor abilities, intellectual and affective characteristics, peer acceptance, and creative thinking. As a group, the nonaccelerated controls did not surpass the experimental group on any of the measures.

Klausmeier and Ripple reported they found no unfavorable academic, social, emotional, or physical correlates of acceleration. In general the accelerated pupils were significantly higher than younger pupils of superior learning ability in the third grade, older pupils of average learning ability in the fourth grade, and younger pupils of average learning ability in the fourth grade. As a group, the accelerates were not significantly different from younger pupils of superior learning ability in the fourth grade who had not been accelerated (therefore, were older than the experimental subjects). Accelerates were significantly lower than older pupils of superior learning abilities in the fourth grade (controls were in the older half of the class).

When groups were divided by sex, the only negative finding was lower peer acceptance for the accelerated boys. The researchers considered the higher grade a better placement for the experimental group because of superior gains made by the accelerants over those in the control groups, together with their view that high school graduation at seventeen rather than eighteen was desirable for the very bright. In a follow-up study, Klausmeier examined 50 boys and 50 girls at the fifth-grade level who had been accelerated according to the plan just outlined.[10] His accelerated subjects were equal to or surpassed nonaccelerated grade peers of average ability and younger pupils of superior ability (younger half of class, but older than accelerates) in all measures of intellectual and psychomotor abilities and adjustment. His accelerated pupils were significantly lower than nonaccelerated older bright pupils in three areas only: word knowledge, total language, and handwriting legibility.

Klausmeier concluded that objections to acceleration based on the idea that essential subject matter content would be skipped were shown to be invalid in this experiment. The accelerated group showed no undesirable effects on personal, social, or emotional adjustment that could be attributed to placement with older peers.

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[9] Herbert J. Klausmeier and Richard E. Ripple, "Effects of Accelerating Bright Older Pupils from Second to Fourth Grade," Journal of Educational Psychology, LIII (April, 1962), 93-100.

[10] Herbert J. Klausmeier, "Effects of Accelerating Bright Older Elementary Pupils: A Follow-Up," Journal of Educational Psychology, LIV (June, 1963), 165-71.

Evaluation of Programs

Martinson studied the effects of a pilot program in which 23 children in the first grade were advanced during the school year to the second grade.[11] She reported that 18 teachers who worked with the pupils indicated that acceleration was not harmful and the children benefited from working up to capacity. Counselors pointed to the lack of materials for children, the lack of clerical help for teachers, the need for inservice work with teachers, and problems of individual instruction in large classes. Sociometric tests showed that gains of accelerated pupils in social status were highly significant when compared with a control group of peers who had remained in their age groups.

Ivey evaluated a program of acceleration and enrichment in mathematics content at the fourth-grade level for children above 115 IQ.[12] He studied 30 pairs of children matched for arithmetic achievement and IQ, and he found statistically significant gains in favor of the acceleration-enrichment group in computational skill. Since the experimental group had spent a considerable part of their mathematics time on new concepts and on discovery procedures, their superior ability in computation skills seemed worthy of note. The experimental group made statistically significant gains (beyond the .01 level of confidence) over the control group in reading and in arithmetic achievement.

Summary of Research

The research on acceleration programs, as reported in journal articles written by competent observers, makes the following points:

1. Most accelerated pupils do better in school and in college than nonaccelerated pupils of comparable intellectual ability.

2. Most accelerated pupils indicate social adjustment, marital happiness, peer acceptance, and avocational interests comparable to or above nonaccelerated groups.

3. Most writers who have been directly involved in research and evaluation of accelerated subjects or acceleration programs favor this administrative arrangement as one of the essential provisions for gifted students.

4. Most opinion reflects an unwillingness to recommend more than two years acceleration prior to college.

5. A form of acceleration established through research and evaluated rigidly

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[11] Ruth A. Martinson and Roy E. Simpson, Educational Program for Gifted Pupils. A Report to the California Legislature. Sacramento: California State Department of Education (January, 1961), pp. 188-89.

[12] John O. Ivey, "Computation Skills: Results of Acceleration," Arithmetic Teacher, XII (January, 1965), 39-42.

over a period of several years verified the practice of individual placement of selected pupils of the second grade in the fourth grade after the pupils had completed a special summer program in lieu of third grade.

6. Those few pupils who show some negative reactions to acceleration are most likely to be boys. Some characteristics most likely to appear are less legible handwriting, disadvantage in physical education activities, and lower acceptance ratings among peers.

7. Accelerated boys are more likely to complete graduate work and enter professions than their nonaccelerated peers.

Many writers expressed opinions on the merits of acceleration, frequently with impressive evidence and experience from which to form the rationale for their positions. Some of these articles are summarized in Chapter 3, "Administrative Procedures." Also cited are some outstanding summaries of research and some examples of administrative positions on acceleration as reported in school district publications. This writer's initial expectation that empirical evidence or impressive opinion that was negative toward acceleration might be located did not materialize. The views against acceleration, sometimes expressed by educators and by parents, were not supported in the literature.

One feature of the ungraded primary plan is that in all instances the pupils' programs are complete in that no steps are skipped, and enrichment of their learning experiences is constantly stressed.

Opportunities for creative work, peer adjustment, and similar needs are related to the quality of the instructional and guidance program rather than to the grade level of the child's placement.

THE PUPPET THEATER

Administrative Procedures

The purpose of the acceleration portion of California Project Talent was to demonstrate a prototype that would meet school needs for a "simple, inexpensive, yet effective program" to advance the academically talented student in grade placement without actual grade skipping. The design for the acceleration prototype was outlined in the project proposal:

> This portion of the demonstration center will focus on academically advanced pupils who will be identified during the second semester of the second grade. As few as two percent and as many as five percent of the second grade pupils may be identified as sufficiently advanced to embark upon a special substitute third-grade summer program. The six-week program will be designed to offer them a condensed review of the third grade. In general, the first two weeks of the program will be devoted to a review and evaluation of third-grade skills with the last four weeks being devoted to individual tutoring and special projects. During their fourth and fifth grades, the accelerated pupils will receive periodic evaluations to ascertain their progress and special requirements. An individual counseling program will supplement their experiences during the fourth and fifth grades.[1]

The plan to accelerate intellectually gifted pupils from the second to the fourth grade via the special summer session was a modification of the design Klausmeier had found successful in his research in Wisconsin (see Chapter 2). Plowman and Rice, codirectors of California Project Talent, raised the IQ minimum from 125 to 130 to conform to the California state criteria for mentally gifted minor (MGM) programs. They also decided to include the entire second grade as potential candidates rather than the older half of the class, as Klausmeier had done.

Prior to 1963 several school districts in California had established planned acceleration programs along the lines suggested in the project proposal. These included Arcata Elementary, Cypress Elementary, Fresno City Unified, Pasadena City Unified, Ravenswood City Elementary, and Reed Union Elementary

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[1] Paul D. Plowman and Joseph P. Rice, Jr., "Demonstration of Differential Programming in Enrichment, Acceleration, Counseling, and Special Classes for Gifted Pupils in Grades 1-9." Project Number D-072. Sacramento: California State Department of Education, April 2, 1963.

School Districts. The governing boards and school administrators in Pasadena City Unified School District and Ravenswood City Elementary School District agreed to participate in California Project Talent as demonstration centers during the three years that the field studies were being conducted. Their participation in other state-identified mentally gifted minor programs continued apart from, and in addition to, participation in the Project Talent program. Districts were encouraged to develop programs for gifted students as outlined in the revised guidelines for program administration.[2] School districts involved in the demonstration of enrichment prototypes for the project were encouraged to expand their programs to include enrichment, counseling, and special classes. The present chapter was prepared for administrators who wish to consider acceleration for selected pupils at the elementary school level. The topics to be discussed are (1) advantages inherent in acceleration; (2) problems associated with this program; (3) acceleration programs in California; and (4) establishment of new programs.

Advantages Inherent in Acceleration

Research comparisons of accelerated students with their older grade peers seem to indicate that most underage gifted students achieve as much or more academically, and in less time, than their nonaccelerated intellectual peers. The problems of whom, when, and how much to accelerate pose questions that must be answered for individual pupils within the context of the opportunities available for them in the respective school districts: community acceptance, specialized experience of professional staffs, materials and financial resources, and availability of programs. Nearly all published discussions regarding the advantages of acceleration focus on the needs of the pupil.

Beneficial Placement of the Child

Pressey was an exponent of the idea that bright boys and girls should be graduated from high school and college early so that the year or two saved might be given to graduate and professional study.[3] The surveys of leaders in the fields of psychology, chemistry, and the social sciences indicated that an early doctorate was more likely to lead to contributions in research and to high positions in professional societies than the doctorate obtained at the average for the field, or later.

Pressey and Kuhlen stressed the finding that much of the outstanding creative work in science, invention, literature, and music comes early in the careers of famous and productive people.[4] The greatest health and enthusiasm to support the creative effort seem to be present when a person is in his twenties and thirties; if full-time education extends through much of this period, the creative potential of the individual may be reduced. Associated with productivity in a career are the needs for the realization of adulthood through marriage and financial independence. The tendency for the average age of marriage to continue downward in the United States tends to increase the cultural pressure on young people to establish themselves earlier in careers or occupations. Many times they have not attained maximal value from formal education by the time they have the desire and the maturity to begin independent work.

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[2] Paul D. Plowman and Joseph P. Rice, Jr., "Program Administration: Revised Guidelines for Establishing and Evaluating Programs for Mentally Gifted Minors." California Project Talent. Sacramento: California State Department of Education, June, 1964.

[3] Sidney L. Pressey, "Age and the Doctorate--Then and Now," Journal of Higher Education, XXXIII (March, 1962), 153-60.

Not all of the benefits which accrue to the well-selected accelerate are deferred to adulthood. In the report of the Elementary School Subcommittee on Gifted Children, Los Angeles City School Districts, the immediate advantages to the accelerant are discussed:

> Acceleration, thus, tends to provide the gifted child with educational experiences that challenge his intellectual abilities. Moreover, it spares him the frustration and the inducement to laziness and superficiality that tend to beset the superior student who is held at a pace determined by classmates of much lower ability. While there are other ways to achieve this end, acceleration is probably the easiest method from the standpoint of both administration and instruction . . . .
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> The typical gifted child usually is large for his age, more mature socially and emotionally than the average child. For this reason he is often more like children a year or more older than he is like his chronological age group . . . . In general, the brighter the child the more closely he should be observed for acceleration.[5]

In San Diego, where grade skipping was not permitted for several decades, school personnel observed that gifted children were sometimes misplaced when confined to their age groups. The following quotation is from a report to the governing board of the San Diego City Unified School District:

> . . . when we took a close look at our gifted youngsters we found that some of them needed to be moved ahead. At least part of their problems came because they were physically, socially, and educationally far beyond their classmates. We discovered that many realistic parents wanted their children accelerated, and for good reasons. We found that some teachers and principals were chafing under the rule which prohibited skipping. So we asked permission to accelerate a few carefully selected gifted children. It worked well. Gradually we extended the practice. At present every

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[4] Sidney L. Pressey and Raymond G. Kuhlen, Psychological Development Through the Life Span. New York: Harper and Brothers, 1957.

[5] "The Gifted Child--How Can the Schools Help." A Report of the Elementary School Subcommittee on Gifted Children. Los Angeles: Los Angeles City School Districts, April, 1956.

> gifted pupil is studied to see if he needs to be moved ahead. If there is doubt in anybody's mind, he is not moved. Approval must come from his parents, teachers, principal, psychologist, and visiting teacher, as well as from the child himself. Usually the change is made in elementary school. We now know that carefully planned acceleration can be of immediate benefit to many gifted children . . . .[6]

When properly selected, gifted children placed in higher grades are provided programs that are more consistent with their academic needs and are given peer contacts that are closer to their own social and physical maturity than they would receive if they were kept with their own chronological age groups. The long-term benefits of acceleration are the proven opportunities for more graduate preparation and earlier entrance into a profession.

Administrative Feasibility

Of the prototype programs in California Project Talent, acceleration is the most easily implemented and administered. This plan for gifted children can be initiated in one or a few schools where the principal and a few selected members of the staff are tuned to the full range of individual differences within a typical class. No long-term budgetary commitment is necessary to begin the program; it can survive, if necessary, on reimbursement of excess costs. Usually no policy statement is required in order for the principal, teachers, and the school psychologist to select a few identified children and to confer with their parents about acceleration. The experience gained in this way can be used to launch the discussions that precede any policy commitment needed to establish the special summer sessions.

Economic Responsibility

Fiscal responsibility requires that the cost of public education for the gifted child be planned and projected. The costs for identification, special summer sessions, enrichment materials, and counseling fluctuate from one school level to another and from one geographical area to another. In California these costs may be classified as excess costs and reimbursed under legislative provisions for the mentally gifted minor programs.

Foundation for Individual Placement

During the three years the demonstration centers for the project were in operation, some of the districts moved toward a concept of individual placement in which several prototype programs for gifted children were made available at one time. Conscious effort was made to extend programs vertically and horizontally. In the San Juan Unified School District, Sacramento County, a special summer session was organized at the primary level in which selected children could take the condensed third grade and accelerate to fourth grade; or other gifted children could attend the session for specialized enrichment opportunities leading to regular third-grade assignments in the fall. In the Davis Elementary School District, the special class for fifth and sixth grades was given group counseling-instructional opportunities comparable to those designed for junior high school students in Project Talent. Ravenswood City Elementary School District provided enrichment in cluster groups for accelerates in the fourth, fifth, and sixth grades. Pasadena City Unified School District initiated counseling-instructional programs for underachievers and expanded the program to the primary level. The acceleration program brings to the attention of the school community the special needs of the gifted pupil, provides a foundation for a broader concept of individual placement, and gives the school staff the experience needed for subsequent initiation of other programs.

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[6] "Report to Board of Education, Programs for Gifted Pupils." San Diego: San Diego Unified School District, Student Services Division, December 1, 1964.

Problems Associated with This Program

Acceleration in the grade placement of young children can engender certain difficulties which, on the whole, are preventable. The failure to accelerate a pupil for whom the prognosis for success is clearly favorable cannot be justified in terms of what is good for the child. However, the reasons so few children are accelerated in some schools need to be understood. This program requires planned, professional action on the part of the school people. Some difficulties or tasks created by the acceleration programs--difficulties that tend to disrupt the adults involved rather than the children they serve--are described in the following paragraphs.

Need for Early Decision

Most experts on gifted child education agree that acceleration should occur early in the child's school life--that is, before peer associations have become strong, before curriculum considerations have become complicated, and before lax habits of scholarship have become fixed. When this practice is not employed, the optimal period for acceleration is past before the need for acceleration becomes obvious. The flexible grouping and the child-centered instructional techniques used at the primary level tend to make teachers think a child is appropriately placed gradewise. Many gifted children have a learning growth rate approximately one and one-half times that of average children of the same chronological age.[7] The gap between the achievement level of the gifted child and that of the average child can be expected to widen continuously.

The need for early identification of the intellectually talented is essential if an early decision regarding acceleration is to be made. The referral of the precocious child of kindergarten age for individual testing is urgent if the school is to provide him with appropriate learning opportunities.

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[7] John C. Gowan and George D. Demos, The Education and Guidance of the Ablest. Springfield, Ill.: Charles C. Thomas, Publisher, 1964, pp. 182-94.

Reading readiness activities should be available to the child as early as he can profit from them. Actions that deter or stifle the child's first spontaneous efforts to read or to write are likely to hinder him from this time on. When the school identifies the gifted child sufficiently early to assign him to cluster groups for enrichment programs in kindergarten or first grade, such placement automatically provides the teacher with opportunities to observe how the child functions in a group, how well he works on his own, and how he relates to others. The results of the observations provides the information needed for later decisions regarding an acceleration program for the child.

Full Sequence of Skills

Early acceleration of the child facilitates his acquisition of those skills required for the new grade or group to which he is assigned. If older pupils observe that the accelerated child lacks the ability to write legibly or to do arithmetic processes well, they may reject him before the teacher has an opportunity to help him establish himself with his new peer group. Another possibility, unfortunately, is rejection by a teacher unaccustomed to receiving an accelerate who may not be aware of his tendency toward superior academic achievement in such less obvious areas as his speaking vocabulary and reading comprehension. Programs like the California Project Talent prototype reduce the pressure to master the basic skills through a specific plan. Teaching of third-grade skills is begun in the second grade, and the special summer session is used to identify any of the other essential skills the accelerate lacks and to help him acquire these skills.

Continuous Enrichment

Usually a child in the acceleration program achieves in the upper quartile of the new class to which he is assigned in reading, spelling, and language skills, and he is usually above the class mean in mathematics. This relatively strong standing is an asset to his ready adjustment to fourth grade. However, due to his rapid progress, potential difficulty occurs because he soon needs enrichment also. Acceleration has reduced but not eliminated his need for curricular adjustments.

Teacher Education

Frequently the level of teacher competence that one may reasonably expect from the general elementary credential program is not sufficient for one to provide specialized instruction for the gifted pupil. Inservice work with teachers is a basic need both prior to and following acceleration. The special summer session is extremely demanding of the energies and skills of the classroom teacher. In the summer, however, teachers who have the personal characteristics and the professional background to assure a satisfying experience for the pupils are available from classroom or supervisory staffs.

In Project Talent, teachers at the primary level who were involved in the screening and identification of potential accelerates learned to discriminate intellectual behavior in young children and gradually made better referrals. Following participation in the program, teachers extended the learning opportunities for bright pupils in the second grade. Joint meetings of recommending and receiving teachers enhanced the chances for full acceptance of the accelerate in his fourth-grade class. Teachers of the intermediate grades were given planned opportunities to discuss the use of interest centers and other devices for enriching the school experience of advanced pupils.

Testing and Counseling Services

The lack of professional staff personnel to fulfill the testing and counseling functions at the elementary school level is common knowledge. Most of the available personnel are needed for identifying the mentally retarded and the educationally handicapped or for counseling the underachiever and the emotionally disturbed. Since public financial support favors handicapped children, the school administrator is left with the difficult alternative of diverting guidance personnel to the gifted program, which has but a fraction of the reimbursement potential. Although the gifted child's educational potential is as far from the mean on the intelligence scale as is that of the mentally retarded child, the school makes relatively few adjustments for the gifted.

Community Acceptance

The acceleration program, in spite of its proven advantages to the student, is opposed by some school personnel and lay adults. Quite possibly the prejudice one observes as consultant for this program stems from a time when grade skipping was practiced without adequate selection criteria--when children who were not mature, socially or physically, were accelerated. The coffee-cup conversation one hears as serious argument against acceleration usually begins with a statement of feeling and is supported by an individual experience with an individual case. The image of the accelerated child is based usually on the rare student who is conspicuous in an older group. Knowledge of the apprehensions that surround acceleration in all its forms enables the district to take the steps necessary to generate community acceptance of the program. Launching an acceleration program of the magnitude required to support a special summer school session needs administrative attention to these and lesser difficulties. Some of the means school administrators have used successfully in establishing this program are described in the section "Establishment of New Programs," which is presented later in this chapter.

Acceleration Programs in California

The state of California reimburses school districts for certain excess expenses incurred in identifying mentally gifted minors and in providing programs for them. A mentally gifted minor is defined as one "who demonstrates such general intellectual capacity as to place him within the top 2 percent of all students having achieved his school grade throughout the state."[8] One of the six basic program types approved for reimbursement was placement in advanced grades or classes (acceleration). In the 1965-66 school year, maximum reimbursement was $40 for each properly identified pupil in an approved program. Expenses that might be claimed included the following: (1) identification; (2) counseling pupils and parents; (3) consultant and instructional services; (4) inservice education for teachers; (5) materials, textbooks, and other books; (6) transportation; (7) tutoring services; (8) summer school; and (9) other services specifically approved by the Superintendent of Public Instruction.

School districts may also claim excess-cost reimbursement up to $20 per mentally gifted child in an approved summer program for gifted children; the reimbursement is based upon attendance for a minimum of 55 minutes a day for 20 days.

The guidelines adopted by the State Board of Education and published by the State Department of Education outlined the minimum standards that govern identification, individual case studies, parent consents, and approvable programs.[9] Proper identification is the responsibility of the administrative head of the school district and is based upon the recommendation of a review committee that includes the school principal, the child's teacher, and a pupil personnel worker who is qualified to administer and to interpret mental ability tests. In the elementary schools (K-6), individual tests, such as the Revised Stanford Binet Intelligence Scale, Form L-M, became mandatory in July, 1965. Scores of 130 IQ or above are required.

Individual case study records that focus on the intellectual characteristics of the child, indications of creative ability, and significant behavior changes are recommended. Examples of the case study procedures used in the Ravenswood Demonstration Center of California Project Talent are presented in Chapter 6. The forms for comprehensive, longitudinal studies of individual pupils are provided for duplication or adaptation by school districts. (See the appendix.)

Demonstration Centers

By the summer of 1965, both of the centers for acceleration programs had evolved a sequence that varied from the Klausmeier design but functioned relatively well within the districts.

In studying the achievement records of 1962-63 accelerates, the coordinator of gifted programs in Pasadena found superior performance on the part of those who had been given both enrichment and the special summer program over those who had been given only one or the other.[10] A survey of teachers showed that they valued the period of time following identification and prior to recommendation when the child's performance in the classroom could be observed. Summer teachers noted the increased skill development shown by pupils who had been identified early over children not identified until late in the second grade. The teachers also reported that they encountered less pressure in preparing students for the fourth grade than formerly and that they were able to plan more enrichment experiences, which they considered important. Children enjoyed art, music, writing, and study trips during the summer programs to an extent that would have been impractical without their having had some work in the third grade during the regular school year. Based on these judgments and the achievement records of students, the acceleration of content to begin in January of the second grade was written into the sequence; enrollment in the special summer session became a requirement for acceleration to fourth grade.

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[8] Education Code Section 6421. Sacramento: State of California, 1965, p. 298.

[9] Plowman and Rice, "Program Administration," pp. 1-9.

In Ravenswood, where the size of the district and the nature of the school population produced a limited number of potential accelerates, all elementary schools were screened for gifted pupils in the second grade. Based on the observations of the initial group of accelerates, new criteria were written for three classifications: (1) probable acceleration; (2) enrichment with possible acceleration; and (3) enrichment only. Some pupils were enrolled in summer programs for the unique experience of participation in a special class. Rice explained the potential value of such participation:

> Perhaps one of the most important innovations of the Individual Placement Project is the utilization of the summer school. This special summer school opportunity has many unique opportunities which might be overlooked by the casual observer, including (1) an opportunity for talented pupils to have a special class outside of the regular school year; (2) the opportunity for talented pupils to embark upon special projects including an introduction to preliminary research methodology; and (3) the precedent for periodical summer school sessions for purposes other than acceleration.[11]

The performance of the gifted pupils was evaluated during the summer session, particularly that of the "possible accelerate." Individual placement was accomplished in September when each child was assigned to the grade level most appropriate for him. In this way gifted children were given a special class opportunity, and those who warranted advanced placement were accelerated early in their school careers.

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[10] Billie K. Press, "Guide for Planned Acceleration for Gifted Second Graders." Pasadena, Calif.: Pasadena City Unified School District, Division of Instructional Services, 1963.

[11] Joseph P. Rice, Jr., "The Individual Placement Project--Suggested Curriculum Development for the Third Grade Summer School." Sacramento: California State Department of Education, June, 1963 (mimeographed).

Number of Students Involved

Approximately two thirds of the mentally gifted minors in California schools are enrolled in districts that offer one or more of the state-identified programs.[12] In 1962-63 about 10 percent of 68,237 participating students were in advanced classes. In Pasadena almost 2 percent of the school population in the second grade was accelerated via the California Project Talent program. One fifth of the identified gifted children were accelerated from the second to the fourth grade; the remainder were in enrichment programs, as were those who had been accelerated earlier. In Ravenswood approximately 3.5 percent of the children in the second grade were identified as gifted and participated in the summer programs. Of these, approximately two thirds of the total, 2.5 percent, were accelerated to the fourth grade.

Establishment of New Programs

Most of the problems inherent in acceleration and most of the difficulties experienced in initiating planned programs for individual placement can be avoided through appropriate administrative action. The number of potential accelerates in a given school district is predictable, within limits, and the characteristics of the successful accelerate are known. The restrictive pressures on the child who is held short of maximal satisfaction and accomplishment may be as damaging as the pressures experienced by the child at the other end of the continuum who is expected to keep up with his age peers. The practice of denying acceleration to children who fit better socially, physically, and intellectually with older groups is not justified by the evidence. To begin a program with a few carefully selected candidates as some school districts have done is a simple administrative step. Planned acceleration on a broad base, as demonstrated in California Project Talent, is likely to succeed if the following steps are taken:

1. Become adequately informed.
2. Plan with the school staff.
3. Prepare cost estimates.
4. Achieve community acceptance.
5. Prepare a handbook for principals.
6. Provide for inservice education.
7. Provide for guidance and testing service.
8. Evaluate the effects of the program.

Become Adequately Informed

The first step in a planned acceleration program should be to provide the adults involved with factual materials. During the 1950s several journals published summary materials of the research on acceleration by Wilson[13] and Shannon.[14]

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[12] Paul D. Plowman and Joseph P. Rice, Jr., "Recent Developments in Education for Gifted Pupils in California," California Education, I (January, 1964), 3-8.

These sources are available in most education libraries and provide a good survey of the problem. Some administrators obtain reprints of these articles or request permission to copy them for distribution to principals and faculty.

Plan with the School Staff

Compulsory participation in any new program lessens its chances for success. Exploratory discussions enable the school administration to determine in advance the prevailing attitudes toward special programs for gifted children and to assess the teaching talent in any one school. Elementary schools should be involved only when the principal actively supports genuine curricular adjustments for gifted pupils. Within a school the staff should participate in choosing the forms of curricular adjustment and in formulating criteria for referral. Teachers should be assured that all the staff is involved in the education of gifted students which includes the following: enriching programs of young children, identifying and referring intellectual talent in new students and underachievers, teaching cluster groups, helping gifted children contribute to interclass and intraclass activities, and sharing professional experience.

Prepare Cost Estimates

The local governing board and the taxpayers may be expected to ask what the program will cost. The state will reimburse part of the excess costs for identification, summer sessions, enrichment materials, and post-acceleration counseling in most districts if appropriate claims are made. The estimated cost of this program can be projected from local records.

Achieve Community Acceptance

The very active members of the community may be more willing to support and promote special programs for gifted children than are the less active citizens, but it is important to have the support of the total community. The judicious distribution of the following information concerning the educational needs of gifted students may help the program gain the unified support it needs:

1. State textbook adoptions have limited value for the exceptional child. As the upper 2 percent of the school population, academically talented

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[13] Frank T. Wilson, "The Evidence About Acceleration of Gifted Youth," School and Society, LXXIII (June, 1951), 409-10.

[14] Daniel C. Shannon, "What Research Says About Acceleration," Phi Delta Kappan, XXXIX (November, 1957), 70-72.

pupils function two or more years beyond the level of the most difficult of state-supplied books by the time they reach the fourth grade. They read four times as much as typical pupils but require only one third as much time to cover the same material. The gifted should be supplied textbooks geared to their academic levels.

2. Measures of human performance tend to accumulate near the mean, or average. The deviations from the mean--the differences from the average--make individuals unique and interesting. All talents are deviations that a productive and free society should nurture. When was the last time a parent refused a child the opportunity to participate in a concert for fear his musical abilities might show? What playground instructor buries the best batter in the dugout for fear his athletic talent might embarrass his parents or inflate his ego?

3. Intellectually superior children, like all children, need the teaching, counseling, and guidance of a supportive adult. One difference is that the gifted frequently grapple intellectually with the problem of growing up or establishing personal identity for years before society provides the social and religious guidance they need. When has a school community provided counseling for emotionally healthy pupils who are intellectually different?

4. Pupils who meet state criteria for state-identified programs test two or more standard deviations above the mean, or higher, on intelligence tests. Assuming that most of the pupils in the class are average or within one standard deviation from the mean, the gifted pupils' intellectual peers are scarce. They are as far from the average as mentally retarded children of 70 IQ or less are. Is it any wonder that gifted children sometimes follow the playground teacher to ask questions or to converse with parents rather than the kids next door?

5. Americans generally are willing to help the underdog--the educationally handicapped, the physically handicapped, the economically deprived, and the culturally deprived. Gifted children need what all children need: educational materials at their achievement levels, instruction geared and paced for their special characteristics, counsel when problems arise, interaction with intellectual peers, and a chance to be themselves. Unlike the handicapped, their education is not expensive, but it should be different from that which is provided for average pupils.

6. The exodus of gifted pupils to private schools occurs increasingly as they advance in school. When a school system fails to provide the unique programs that are required at the top of the continuum, it denies for all the children the contributions gifted children make to their school.

Community acceptance is obtained in the same way staff acceptance is attained--with information and matter-of-fact assumption that the public schools expect to provide education to the maximal extent of each pupil's ability to learn. Well-planned public relations need not be conspicuous to be effective. When the Ravenswood program was initiated, the staff held individual conferences with parents of identified children to explain the acceleration program and to obtain written permission for the child's attendance in the summer session. Later, when the program was established, parents were contacted by phone, and permission slips were handled through the mail. Coffee klatches were popular in Pasadena where parents observed in the classroom and chatted with the teacher and each other about the program.

The Pasadena Association for the Gifted, the Pasadena Council of Parents and Teachers, and Pasadena City College jointly sponsored a series of lectures for parents and teachers which were open to the public. The district superintendent, the consultant for gifted programs, and special consultants Ruth Martinson, Leon Lessinger, and Marcella Bonsall lectured at the meetings. The content of the series which follows may be of interest to those planning one or more meetings within the school community:

Session 1--Helping the Gifted Adjust Socially. What do we mean by social adjustment? Helping the child feel comfortable with himself and society. Promoting acceptance of individuals of high ability.

Session 2--Fulfilling the Needs of the Gifted Child at Home. My child has just been identified as gifted; what do I do now? What do we mean by pressure? How can parents utilize community resources? (What out-of-school opportunities are there?) Living with differences of ability in the same family.

Session 3--Motivating the Underachiever. What factors contribute to lack of performance? Do we expect too much? How do we assess a child's capacity? Should we insist on conformity (where grades are concerned)? What learning situations could inspire and encourage an underachiever? Parents' attitude toward the underachiever.

Session 4--Problems Affecting Appropriate Education for the Gifted. What can tests tell us? What about grades, particularly in honor classes? What is enrichment; is it merely added work? Methods of acceleration--pros and cons. Public acceptance of the need for special education for the gifted. Creativity versus giftedness.

Session 5--What Our Communities Are Doing for Academically Talented Children. Identification of the gifted--procedures and problems. Ungraded classes. Team teaching. Combined classes and clustering. Teaching machines and television. Reading in kindergarten. Early school entrance. Acceleration. Specialized high schools--fine arts and science. High school programs: honor classes, specialized high schools, advanced placement in college.

Prepare a Handbook for Principals

Medium and large-size school districts may want to incorporate under one cover the policies and other administrative guidelines that pertain to programs for gifted students. Such a handbook might include the following: (1) a brief history of the provisions for gifted pupils within the district; (2) a report of any preliminary or exploratory programs that might have been attempted; (3) legislation, state criteria, and district policies regarding gifted pupils; (4) current status of plans for new programs; (5) prerequisites for school participation in a program; (6) tentative schedule for the implementation of new programs; (7) curriculum guides, including any departures from district practice in the use of basic and supplemental materials; (8) sample forms of notices, referrals, and reports; (9) reprints and bibliographical material; and (10) plans for evaluation of the program. Small school districts may prefer to discuss and formulate plans informally through study groups or principals' meetings.

Provide for Inservice Education

The structure for teacher education will vary with the size of the school district, its proximity to institutions that offer graduate-level work in education of the gifted, the consultant services available within the district, and various financial considerations. Inservice education for teachers may include conferences, special meetings, workshops, and courses for credit.

Conferences with the school principal, the school psychologist, or the parents of gifted children contribute to the teacher's insight into the affective characteristics of particular children and gifted pupils as a group. Service on the identification committee alerts each of the adult participants to the individuality of children and helps them to accept responsibility for each child's future success in whatever program is recommended.

Special meetings for teachers of gifted pupils enable the teachers to share techniques and materials and to discuss mutual problems. Special consultants may be engaged whenever the teachers see a need for such special help. Teachers need assistance in their initial selection of materials which will be different from those used in typical classrooms at the grade level they teach. Successful inservice meetings are characterized by teacher participation in the presentations, by freedom in the exchange of ideas, by acceptable blending of the organizational and theoretical aspects of teaching the highly intelligent, and by empathic support of efforts toward recognizing and meeting the academic needs of all individuals.

Workshops for California Project Talent teachers varied in length from a few hours to four weeks. Two or three days at the end of the school year were found to be productive for evaluation of the program and for preparation of needed curricular materials. One or two sessions during orientation week can be extremely valuable, particularly when the second-grade referring teachers are on hand to brief the receiving fourth-grade teachers and, in turn, to hear about the characteristics of successful accelerates.

A statewide workshop was offered for credit as a joint venture of Sacramento State College, San Juan Unified School District, and the California State Department of Education (California Project Talent). Differential programs, including the special summer session for accelerates, were demonstrated as part of the district's summer offerings for children. The college and the project staff shared in lecturing, demonstrating, and conferring with adult students. Instruction of the teachers stressed identification procedures, curriculum planning based on case-study information, methods of stimulating productive thinking, and differential program construction.[15] The workshop comprised a full study load and offered four units of college credit for four weeks.

Courses on the education of gifted children were offered at several institutions, usually as a specialization beyond the general credential. California State College at Los Angeles offered a special education laboratory for credit, which was to be taken concurrently with the theory course. Teaching fellowships were awarded to highly selected candidates who served as teaching assistants to the master teachers of school district programs for gifted children. Classrooms where the fellowship teachers were assigned also served as observation centers for adult students enrolled in the campus lecture and laboratory classes.

Provide for Guidance and Testing Service

School psychologists and psychometrists administer individual intelligence tests, serve on the recommending committee, and counsel pupils and their parents. The total special services needed by gifted children is relatively low, but provision must be made in the schedule of elementary school counselors for some work with gifted accelerates both before and immediately after advanced placement. Unless this kind of help is arranged in advance, the urgent problems of the disturbed or retarded children are apt to deprive the gifted of the limited but significant attention they need. The role of the school counselor in the acceleration program is explained more fully in Chapter 4, "Identification, Placement, and Counseling."

Evaluate the Effects of the Program

An admonition to evaluate an educational program may seem unwarranted, but evaluation remains the weakest phase of most project proposals. The planning and initiation of evaluation proceedings should coincide with the planning and initiation of the new program. In many instances data needed for evaluation must be collected a year or more before innovations are implemented in order to make defensible comparisons or to arrange control groups. Some of the problems school districts encounter and two examples of how the Demonstration Centers evaluated their acceleration programs are included in Chapter 7, "Evaluation of Acceleration Programs."

Certain minor problems related to acceleration programs were cited by teachers and others who worked with project children. These include the need for earlier identification, lack of school time for creative production, problems of adjustment in transferring to gifted or older classes, lack of time to develop research skills, unbalanced sex ratio in summer classes and cluster groups, disadvantages to boys in competitive sports, and undesirable side effects on the social life of the child. Experience in California Project Talent indicates that none of these problems are inherent in the program. Children who exceeded average intelligence by two or more standard deviations required individual attention no matter what their grade placement. Opportunities for creative work, peer adjustment, and similar needs are related to the quality of the instructional and guidance program rather than to the grade level of the child's placement.

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[15] Louise M. Bachtold, "Report of a Pilot Summer Session Workshop-Demonstration, 1964." California Project Talent. Sacramento: California State Department of Education, April, 1965.

Special considerations, such as the use of a typewriter to ease the frustration of cursive handwriting, should be encouraged unless such a provision handicaps the child in adjusting to the fourth grade.

Identification, Placement, and Counseling

Those aspects of the planned acceleration program which relate directly to the pupil personnel and guidance functions of the school will be discussed in this chapter. The first section of the chapter is concerned with specialized roles of school psychologists, counselors, and psychometrists in the acceleration prototype of California Project Talent. The remaining sections describe, in the order suggested by the chapter title, the testing and guidance procedures which were found essential in the Demonstration Centers. Identification involves screening, testing, and locating as large a portion of the gifted population as possible--within the limits of test validity and staff availability. Placement concerns the recommendation of the best possible program for each identified gifted child in terms of his immediate adjustment and his projected career potential. The section on counseling was written for this report by John A. R. Wilson, whose own research involved gifted students whom he studied as achievers or nonachievers at the junior high school level.

Roles of School Psychologists, Counselors, and Psychometrists

The sequence for planned acceleration includes identification at the second grade, a summer program of specialized work in the third grade, and guided matriculation in the fourth grade. The purpose of the program is to help academically talented children make a successful transition to a higher grade, where the range and pace of the instruction are more appropriate to their demonstrated abilities. Although the subtle and positive influences of special services personnel is recognized as highly important to the success of any program innovation, this discussion must be limited to three types of involvement:

1. Selection of pupils for individual placement

2. Observation of students in summer programs

3. Counseling which follows entrance into the fourth grade

Usually the selection of pupils for summer gifted programs is the work of an initial placement committee, one member being the school psychologist or the counselor. A psychological evaluation based on an individual intelligence test, achievement levels, and personality assessment is an essential component of each decision. As part of the identification process, the school psychologist administers the Stanford-Binet Intelligence Scale, Form L-M, or alternate intelligence tests, considers and secures evidence of personality development, and participates in the evaluation of an individual's eligibility for the acceleration sequence. Since one school psychologist is the key person in the interpretation of intelligence and aptitude data, his recommendations should reflect an operational knowledge of recent developments of intellectual constructs and personality theory. Especially pertinent to the intellectually talented are the implications of Guilford and Merrifield's "Structure of the Intellect," namely that one expects to find highly unique combinations of ability in people.[1] Maslow described the development of the healthy personality, with emphasis on creative productivity.[2] Krathwohl and others contributed to the Taxonomy of Educational Objectives Series with their volume on empathic, attitudinal, and value structures for the school.[3] Bruner differentiated between acquisition, transformation, and evaluation as learning processes--a distinction that is particularly useful in the guidance of superior learners.[4] Wooldridge published a chapter on higher learning in his book on brain activity, which should add substantially to the repertoire of the consultant or counselor.[5]

The necessity for a professionally sophisticated approach is further indicated by evidence of certain intellectual patterns which apparently are not conducive to success in important school activities, particularly reading.[6] Screening procedures which include group tests of middle grade students or older usually eliminate the intellectually superior child whose reading is average or below. However, screening based on picture-vocabulary or other nonreading observations may serve to identify some young children whose learning characteristics indicate the need for preventive help rather than acceleration. It is hoped the psychologist will collect and contribute his observations beyond the decisions of acceleration versus nonacceleration to a consideration of the intrapersonal characteristics of each child in the high IQ group.

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[1] J. P. Guilford and P. R. Merrifield, "The Structure of the Intellect Model: Its Uses and Implications," Reports from the Psychological Laboratory, University of Southern California, Monograph Number 24. Los Angeles: University of Southern California, April, 1960.

[2] Abraham H. Maslow, Toward a Psychology of Being. Princeton, N.J.: Van Nostrand Co., Inc., 1962.

[3] David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masia, Taxonomy of Educational Objectives, Handbook II: Affective Domain. New York: David McKay Co., Inc., 1964.

[4] Jerome S. Bruner, The Process of Education. Cambridge, Mass.: Harvard University Press, 1960.

[5] Dean E. Wooldridge, The Machinery of the Brain. New York: McGraw-Hill Book Co., Inc., 1963, Chapter 11, "Higher Learning."

[6] Florence C. Rose, "The Occurrence of Short Auditory Memory Span Among School Children Referred for Diagnosis of Reading Difficulties," Journal of Educational Research, LI (February, 1958), 459-64.

The school psychologist or a qualified alternate serves as a resource person for the selection and administration of screening instruments. He needs to know and recommend appropriate standardized achievement and ability tests, to advise teachers in testing procedures, and to interpret the results with reference both to the significance and to the limitations of specific measures.

In the interest of economy, the director of specialized services should be familiar with ways in which statewide testing requirements and districtwide testing programs can be coordinated so that the data needed for this program may be obtained, at least in part, without additional expenditures for group tests.

Among his many potential contributions to this type of program, the counselor confers with the teachers on sociometric techniques and the usefulness of sociograms in recording systematic observations of peer group relationships. In large school districts, psychometrists generally will have major responsibility for screening procedures, and psychologists generally will assume major responsibility for individual evaluation. Decisions regarding the specific roles of school psychologists, psychometrists, and counselors will depend in part on district policy and on the qualifications of these persons within a given school.

The second rung in the child's acceleration sequence is the summer program--a condensed school session of third grade enrichment in social science, science, and basic skills curricula. Much of the work is based on analyses of what individuals need to learn for a successful transition to the fourth grade. The involvement of psychological services personnel in the decision-making functions described previously and in the consultant functions to be cited later requires some immediate knowledge of the experiences that supposedly prepare the children for work in the upper grades. The summer programs in Ravenswood and Pasadena were observed closely in the beginning by the counselors who would interview and counsel the accelerates the following fall. The counselors' initial decisions about the priority and the extent of counseling services were based on case studies and the pupils' observed performance in the classroom.

When the accelerates enter the fourth grade, the counselor for gifted pupils functions, at least initially, as a consultant for their parents and teachers. Individual pupil problems may develop, as in any situation where unusual or recurring adjustments are required. The child who has learned to expect relative excellence as routine may find his self-image challenged and his new environment insecure. The teacher who has negative fixations or unrealistic expectations needs consultation with one who is knowledgeable on teacher-pupil relationships and understands the pressure on teachers who attempt to meet the intellectual needs of each learner.

Particularly important is the psychologist's concurrence when guidelines for observing, evaluating, and grading accelerated pupils are formulated. In the experience of the Project Talent staff, report cards or other forms for rating students' achievement needed special attention in the fourth grade to avoid unreal discrepancies between classroom and test performance. School psychologists can be helpful at this point in interpreting the test scores of underage children. Individual placement demonstrations have shown, however, that accelerated pupils tend to adjust readily, learn rapidly, and attain a relative position of excellence during the year in which they are in the fourth grade.

Screening and Identification

In this report "identification" means locating the school children who must meet the California state minimal criteria of 130 IQ on an individually administered test, such as the Stanford-Binet Intelligence Scale, Form L-M,[7] or the Wechsler Intelligence Scale for Children.[8] Pupil personnel and guidance departments usually rely on the referrals of teachers for their lists of kindergarten-primary candidates to be tested. After a child has been identified as gifted, his program, or placement, will need to be determined. One member of the committee making the decision should be the child's classroom teacher. The problems of locating children with high intelligence quotients and of defining the characteristics other than high IQ that were found to be important in successful acceleration in the Demonstration Centers will be discussed in the material that follows.

Screening at the Kindergarten Level

Martinson reported the need for the early identification of gifted children.[9] During Martinson's state-supported, three-year study, multiple screening criteria were devised at the kindergarten level. These included teacher judgment, a teacher identification form, the Pintner-Cunningham Primary Test, and the Goodenough Draw-a-Man Test. The kindergarten referral form recommended that teachers watch for unusually good vocabulary, very original ideas, alert and quick responses, unusually good memory, long attention span, some sight vocabulary, use of long sentences, ability to see relationships, curiosity, leadership, and special talents. Nearly half the pupils thus screened qualified for state programs. The number of children missed by this process is not known; however, 5 percent of the total kindergarten population were identified as gifted in the school district where this procedure was tested--a higher proportion than is expected in most school populations.

The Kindergarten Evaluation of Learning Potential (KELP) was found to produce teacher observation scores that were highly related to mental age and IQ, as determined by the Stanford-Binet Intelligence Scale, together with low correlations between KELP scores and chronological age.[10] Eleven kindergarten items used by the teacher in day-to-day instruction identified the children who could function at different levels simultaneously and the individual pupils who could proceed beyond association learning to conceptualization and creative self-direction. The teacher was able to observe and to record each child's performance on school readiness activities.

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[7] Lewis M. Terman and Maud A. Merrill, Stanford-Binet Intelligence Scale, Form L-M. Boston: Houghton Mifflin Co., 1960.

[8] David Wechsler, Wechsler Intelligence Scale for Children. New York: Psychological Corp., 1949.

[9] Ruth A. Martinson and Roy E. Simpson, Educational Programs for Gifted Pupils, A Report to the California Legislature. Sacramento: California State Department of Education, January, 1961, Chapter 7, "Identification of Pupils."

Selecting Accelerates in Pasadena

Screening children for the acceleration program in the Pasadena Demonstration Center began at the first grade, and it was at this time that teachers nominated for individual testing those pupils who showed evidence of giftedness. Copies of a checklist for screening mentally gifted pupils were sent to each elementary school principal for distribution to teachers of the first grade.(See the appendix for copies of the forms.) Nominations, or referrals, were made to the guidance and counseling department, and psychometrists were scheduled to administer the individual tests sometime during the first grade. Children who scored 130 or more on the Stanford-Binet Intelligence Scale were placed the following September in the gifted-cluster group in the second grade.

During the fall months of the second grade, the teachers of gifted-cluster groups had a chance to observe each child's performance in the classroom. Teachers were urged to collect additional data as needed to evaluate the child, using such sources as a pupil adjustment inventory, Vineland Social Maturity Scale, and sociometric standing. In group meetings, teachers were advised to consider the candidate who displayed an interest in learning and possessed the necessary skills to succeed in acceleration, even though he was not conforming, was not being pleasant toward the teacher, or was not serving as a leader among his peers.

Teachers of the second grade were asked to recommend for acceleration those children who had, in addition to a high IQ, the following characteristics:

1. Strong academic talent as shown in classroom work by superior reading comprehension, independence in word attack, advanced mathematical concepts, problem solving ability, arithmetic computation skills, fluent speech, and superior vocabulary
2. Unusual motivation for achievement as shown by initiative and originality, good work habits, self-direction, high aspiration level, and persistence in completing tasks
3. Self-acceptance and confidence as shown by willingness to accept evaluation, realistic effort in areas where talent is lacking, ability to stop short of perfection when necessary, and enthusiasm for challenging tasks

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[10] Mildred C. Robeck and John A. R. Wilson, "Comparison of Binet and the Kindergarten Evaluation of Learning Potential," Educational and Psychological Measurement, XXIV (Summer, 1964), 393-97.

4. Overall potential as indicated by standardized achievement test scores above the 95th percentile in both reading and arithmetic, emotional stability, social competence, regular attendance, good health, high energy level, and home interest in the child's school progress

By January each gifted child in the second grade in the participating schools was reviewed for possible acceleration by a selection committee which usually consisted of the principal, the classroom teacher, a guidance person, and a consultant. Parents of the children recommended for the special session and acceleration were contacted. If the parents gave written permission for the child's participation, the child was given accelerated content within his cluster group for the remainder of the time he was in the second grade.

Establishing Programs for Young Children

Hollingworth, who used case study procedures for her longitudinal research on highly gifted children, cited the need for early provisions or adjustments in the children's educational programs.[11] She expressed the view that young children who had not attained independence in reading and library skills had less opportunity to escape from boredom than did older students. She observed that highly intelligent young girls had greater difficulty adapting to the age-peer groups than did boys or less intelligent girls. Intellectual stimulation early in the school life of the child was considered extremely important by Hollingworth.

Jacobs found in his studies of gifted children that their identification did not result in superior school achievement over children who measured as high intellectually but who were unidentified as far as teachers and parents were concerned.[12] His subjects were 100 mentally superior pupils in grades four through six who were assigned to two matched groups. Parents and teachers of the experimental group were involved in conferences during which the children's superior ability was indicated. The investigator's hypothesis that conferences would change the psychological environments of the children and result in improved school achievement was negated by the evidence. Neither group of children was involved in a special educational program; the only treatment being tested was identification and conferences with adults.

Individual Placement

When screening and identification for mentally gifted minor programs is followed with a committee recommendation for each child--either in favor of or opposed to acceleration--a potential problem is created for the nonaccelerated pupil and for his parents. To avoid this problem, the Ravenswood Demonstration Center developed a procedure whereby gifted children could be identified first for enrichment programs and reviewed at a later date for individual placement. The sequence might be implemented at any elementary school level, but in the second grade the schedule might operate as follows:

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[11] Leta Hollingworth, Children Above 180 IQ. Yonkers, N.Y.: World Book Co., 1942, p. 282.

[12] Norman Jacobs, "Formal Recognition of Mentally Superior Children: Its Effect on Achievement and Achievement Motivation." Unpublished doctoral dissertation. Palo Alto, Calif.: Stanford University, January, 1959.

1. All pupils in the second grade are administered group tests near the end of the year:

   Achievement tests, such as the following:

      California Achievement Tests, Upper Primary
      (California Test Bureau)

      Metropolitan Achievement Tests, Primary II Battery
      (Harcourt, Brace & World)

      Stanford Achievement Tests, Primary II Battery
      (Psychological Corporation)

   Intelligence Tests, such as the following:

      California Test of Mental Maturity, Form 1
      (California Test Bureau)

      Kuhlmann-Anderson Intelligence Tests, 7th Edition B
      (Psychological Corporation)

      Lorge-Thorndike Intelligence Tests, Primary 2
      (Houghton Mifflin Company)

      Pintner-Cunningham Primary Test
      (Harcourt, Brace & World)

      Primary Mental Abilities Tests - Grades 2-4
      (Science Research Associates)

2. Pupils who fall at or above the 90th percentile are administered an individual intelligence test, such as the following:

      Stanford-Binet Intelligence Scale, Form L-M

      Wechsler Intelligence Scale for Children

3. Teachers are asked to complete a pupil inventory of pertinent behavior characteristics on all pupils who show a minimal IQ 130 + SE. (See the appendix for sample forms.)

4. Committee on Programs and Placement of Gifted Students reviews each case record and recommends the special summer program of enrichment

with tentative staff commitments to each pupil as follows:

- a. Enrichment in the third grade
- b. Enrichment and possible acceleration
- c. Enrichment and probable acceleration

5. Parents are consulted regarding the summer enrichment program and may, at that time, grant written permission for the child's participation. In the case of categories 1 and 3, pupils' fall assignments may be discussed as tentative.

As evolved in the Ravenswood Demonstration Center, the sequence that led to placement was: (1) nomination; (2) screening; (3) examination; and (4) classification.

Nomination

Conferences, observations, and test periods for the selection of potential candidates for the program were established early in the spring when meetings were held with each elementary school principal for that purpose. Screening and classification criteria were discussed at group conferences with teachers of the second grade. The need was recognized for identification of children with high intellectual potential and high achievement who also were mature physically, emotionally, and socially. A consultant met later with each teacher of the second grade to review records of high achieving students and to prepare lists of children to be tested with group achievement tests. Care was taken to nominate sufficient numbers to ensure inclusion of all children capable of succeeding either in the enrichment or in the acceleration program.

Screening

The California Achievement Test, Upper Primary Form W, was administered to the children nominated by the teachers as high achievers. The initial selection of approximately one-third of the second grade class for screening offered certain advantages: (1) tests with ceilings adequate to measure the achievement of most gifted students could be selected; (2) pupils who were not ready for pencil and paper tests were not subjected to them; (3) psychometric work was accomplished in one testing sequence in each building; and (4) all students with a reasonable chance to qualify for special programs were included. Children whose achievement scores approximated fourth grade level in the group test were referred for individual testing with the Stanford-Binet Intelligence Scale, Form L-M.

Classification

The committee for certification and placement included the building principal, the teacher of the second grade, the district consultant for gifted, the associate superintendent, and the project consultant. Each child who had shown IQ scores of 130 or higher on the Stanford-Binet Intelligence Scale was scheduled for review. On the basis of data available to that point, each child was considered for the special summer session and recommended for one of the following:

1. Probable acceleration following the summer program
2. Enrichment in summer school with possible acceleration
3. Enrichment program only in summer school

Summary of Identification Data

In the ensuing years, the number of children identified and recommended for the summer enrichment program was relatively constant. However, the criteria for acceleration became more selective each year (see Table 1). The results of the identification procedure for the final year of the project are shown in Table 2. Of approximately 600 pupils in the second grade, 183 were nominated for the group testing program; 75 were screened for individual intelligence tests; and 31 were found to be eligible, according to IQ minimum criteria. Two children who showed tension symptoms were not recommended for enrichment. Of the 29 pupils who were recommended for the special summer session, 24 were enrolled and eight were accelerated.

The committee recommended 11 children for category 1, "probable acceleration"; ten children for category 2, "possible acceleration"; and ten children for category 3, "enrichment only."

Table 1

CHILDREN IDENTIFIED FOR SPECIAL PROGRAMS
IN RAVENSWOOD

Year	Number in summer session*	Percent of grade two	Accelerated	Moved	Included in case summaries
1962 - 63	27	5	24	8	16
1963 - 64	20	4	12	5	7
1964 - 65	24	4	8	0	8
Total	71	4	44	13	31

*Number of identified gifted enrolled in the special summer session

Table 2

CHILDREN IDENTIFIED AND RECOMMENDED FOR SUMMER ENRICHMENT PROGRAM FOR 1964-65

School	Number of children nominated for group testing	Number screened for individual IQ tests	Number identified for summer enrichment program	
			Grade	Number
A	34	9	1	3
			2	2
			3	2
				7
B	32	5	1	1
			2	1
			3	2
				4
C	23	9	1	0
			2	1
			3	1
				2
D	30	10	1	1
			2	2
			3	3
				6
E	17	13	1	0
			2	1
			3	0
				1
F	12	10	1	0
			2	0
			3	0
				0
G	29	17	1	6
			2	3
			3	1
				10
H	6	2	1	0
			2	0
			3	1
				1
Total	183	75		31

Counseling Accelerates, Parents, and Teachers[13]

Counseling in the elementary school has not been differentiated in most schools from the rest of the teaching and administrative duties of the regular classroom teacher or the principal. They assume that they should help children work through their personal problems, study problems, and adjustment problems of all kinds. Teachers have become accustomed to having the principal available for help and support in cases which are too difficult to handle within a group of children. When counseling services are provided by a specialist in most schools, these services are usually limited to (1) individual testing and conferences about placement for the mentally retarded; or (2) testing for identification of children classed as gifted by the California state criteria.

The counseling functions of the teacher, principal, and psychometrist are important and will continue to be important in any school, especially in schools that provide special work for gifted children. But there are other guidance functions that require more time and effort than it is reasonable to expect from principals or teachers. Counseling services are needed that aid parents, children, and teachers to adjust in positive and constructive ways to new demands and new programs. Some of these services, in the context of this special placement program, will be discussed in the following paragraphs.

Problems in Counseling the Identified Gifted

In the context of the acceleration prototype of California Project Talent, there are three major points at which counseling is important: (1) the point of identification; (2) during the summer program while decisions are being made about acceleration; and (3) during the fourth grade when many new problems are faced by the children. At each of these times, three different groups of people need help: parents, their children, and the teachers who work with both of them.

Counseling with Parents--Second Grade

Group counseling sessions have a number of advantages over individual work when the purpose is quasi-instructional or when the counselor wants to begin attitude formation. One of these advantages is that it allows the counselor to test ideas in an environment that is permissive but which still allows for interaction with peers. If acceleration programs are going to be successful, the parents should be informed that their children are being considered for such a program, and the advantages and possible disadvantages of the program should be identified. The parents need to work through the implications and the emotional problems involved in deciding either for or against acceleration of their particular child. Usually these parent meetings must be held in the evening. They should be long enough and frequent enough for the parents to overcome their fears and to explore actively the problems involved in special placement programs.

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[13] This section on counseling was written by John A. R. Wilson, Associate Professor of Education, University of California, Santa Barbara.

A time factor is involved in growing accustomed to the idea that a son or daughter is gifted. Help is necessary in generating a positive, but not possessive, attitude about having children who are unusually capable. Being a member of a group of similar parents aids the individual to accept the advantages without becoming conceited about the ability of the child. In these conferences or group sessions, the possibilities of summer sessions, special placement, and enrichment programs can be explored. The threats and stimulation that are inherent in acceleration should be considered in the context of the research findings.

Counseling with Children--Second Grade

The children who are being considered for acceleration require similar group counseling sessions to talk about some of the same material suggested for their parents. The aim of these sessions is to help the children develop a self-concept as able people, with a responsibility to develop their talents for their own sake and for the eventual contribution they can make to society.

These children need to see themselves as willing and able to cover class material quickly and in greater depth than some of them have been accustomed to doing. Some adults will find the idea of seven-year-old children holding discussion sessions for these ends novel and somewhat distressing. Bright children are more able in these ways than many adults anticipate.

The children can explore opportunities for forming new friendships. The emphasis of this counseling is on the development of an open, accepting point of view rather than closed, frustrated, or wary expectations of the potential opportunities inherent in the acceleration program.

Some children in the second grade need individual counseling; for example, a girl who had learned to read at three frustrated her mother, a child psychologist. At the time her mother sought counseling, the girl was reported to lack comprehension in reading, according to her teacher. Exploration indicated that the girl closed her ears to the oral reading and then "read fast to catch up when the kids are just about done" with the story. Unfortunately, the teacher who noted the girl's lack of attention questioned her during the period when the world of the classroom was shut out. The girl's responses were unsatisfactory, so she was reported as failing. Individual counseling was needed to help her accept the school situation. In complex situations like the one the girl exemplifies, individual work will probably be needed by both the mother and the teacher if they are to help the child in her reorientation to school.

Counseling with Teachers of the Second Grade

Most teachers have had neither training nor study in the characteristics, strengths, and weaknesses that set the gifted child apart from other children.

The brief orientation they had to acceleration was oversimplified and probably was remembered inaccurately, although sometimes with a heavy loading of emotion. Of all the people who work in groups with the counselor, the teacher may be the one who can profit the most. In such a setting, the research findings can be reviewed, discussed, and analyzed for clues to what can and should be done for the children in the various teachers' classes. These discussions need to grapple with the problems of cluster grouping for accelerated and enriched work, the problems of identification of the gifted child who comes from an impoverished background, the problems of helping the mothers who want to keep the children babies, and other problems of atypical children. Most pupils will require the concerted help of both the teacher and the counselor if the potential they show in second grade is to be realized.

Summer Session Counseling

The children who are attending summer session as a bridge from cluster grouping in the second grade to regular membership in the fourth grade need counseling help as they prepare for a more formal school environment. An awareness of the very real transition that occurs from the third to the fourth grade can make the new and demanding environment an exciting rather than a frustrating experience for the children.

Either the counselor or the teacher or both will need to meet with parents of children whose placement was not yet determined when summer school began. Often the pupil should be included in the discussion. The essential outcome of counseling the child who will enter the third grade rather than the fourth is that his feeling of worthiness as a competent person is maintained, that some of the constructive reasons for his placement are understood, and that possibilities of acceleration remain in the future.

Counseling in the Fourth Grade Accelerate Program

If the parents of children with special placement in the fourth grade have participated in well-structured counseling sessions while their children were being considered for acceleration during the second grade, the parents will be prepared for most of the problems that arise as the children enter the fourth grade. However, there are always some problems that were not anticipated or understood when they finally materialize. A continuation of two or three group meetings will enable the parents to explore areas of anxiety and, at the same time, to share information. They can become assured that the placement of their child in the fourth grade has been successful, or, if unsatisfactory, they can find precise ways to cope with problems that almost certainly will prove temporary.

In small group counseling sessions, it is possible for the accelerated students in the fourth grade to learn to discriminate which of the new roles and expectations they find themselves assuming demand conformity in a deep sense. Failure in this or that particular may lead to failure in adjustment, achievement, or social relationships. At the same time, students are able to learn which of the alternative roles are preferable and can be assumed, enlarged, or neglected as their creative urges dictate. These understandings can be developed, through a group process, from a few leading questions prepared by the counselor to stimulate the discussion and to help keep the topic in focus.

Within these discussions the expectations of other pupils in the fourth grade can be explored. Topics that bright eight-year-old children are able to discuss and can relate to their present group membership are (1) the tendency of groups to establish ranking orders; (2) role expectations for various group members; and (3) appropriateness or inappropriateness of roles in filling the needs of the group. While it is desirable for purposes of both reinforcement and economy to keep the special placement pupils in groups for counseling, the pupils should be encouraged to make friends outside their own cluster group. This encouragement can be both overt and covert, but the desirability of such broadening friendships can be discussed quite openly in the group guidance sessions.

Either in group sessions or individually, the children need some individual attention to adjustments in various subject areas. Assistance in establishing key concepts in certain fields of study can mean the difference between security and success--or frustration and failure. These children will fill in most of the necessary bits and pieces if they are able to structure the basic framework of ideas that often are achieved laboriously by trial and error, or are never achieved, by children in the regular school program. The children can be helped to build constructive self-concepts if they are given access to the research findings concerning other accelerated children.

All statements made in regard to counseling with teachers of the second grade hold true for the receiving teachers of the fourth grade. A teacher who has a strong negative feeling about acceleration--and there are such teachers--should not be asked or allowed to have accelerated students promoted into the classroom. This administrative decision is basic to the mental health of the children and the teacher. The possibility that such teachers may feel discriminated against--particularly when they will get a slower class--must be faced and acknowledged, but the alternative is so damaging there can be no question as to the wisdom of the decision.

The teachers who do receive the accelerates need help with both subject matter enrichment and personality development of the children. Ways of meeting these needs should be explored so that materials and supportive help can be given with the least possible effort on the part of the teacher.

Summary

Throughout this section an implicit assumption has been made that someone will fill the counseling role. This person may be a principal, a teacher, or a counselor. Most of the training programs for each of these professionals were developed at a time when special placement programs were not used widely in California. Many of the counselors are not yet oriented to their potential role in facilitating accelerated students to take their next steps with ease. Some counselors have not yet had intensive work in group process and are unwilling to use techniques with which they are unfamiliar.

Successful acceleration of children does not happen automatically. Principals, teachers, counselors, parents, and children all require systematic learning experiences if the benefits inherent in the program are to be realized.

Because of the importance to the children, parents, and teacher, counseling service must be available if a successful program is to result from a decision to include acceleration as one of the options by which the needs of gifted children are met within a district.

Summary of the Chapter

This chapter outlines the aspects of the acceleration program that require the specialized service or involvement of pupil personnel and guidance departments of school districts. Emphasis was given to the implementation of programs patterned after the California Project Talent prototype in which children were accelerated from the second to the fourth grade after attending a special summer session.

In order to avoid the excessive costs of testing many children who do not qualify for mentally gifted minor programs, screening procedures are needed which select nearly all gifted children while eliminating nearly all pupils who do not qualify for reimbursable programs. The use of teacher evaluations based on observation instruments or checklists was recommended for screening with subsequent group tests of achievement and ability.

A review committee consisting of the designated school administrator, the child's teacher, and a guidance specialist or special consultant should consider the available data for each child and recommend the program or placement that is most suited to his academic and personal development at the time. Children recommended for acceleration should possess the characteristics that make advancement to an older group a more suitable intellectual and social placement than continued assignment to age-peer groups.

In spite of the superior school achievement and generally good adjustment of gifted children as a group, accelerates, their parents, and their teachers should be provided specialized group and individual counseling. Crucial periods when counselors should be available for this program are the time of identification, the special summer session, and the weeks following acceleration to the fourth grade.

Children's competencies in skills should be developed to the utmost, but opportunities should be given also to provide multiple avenues for expression and action.

PROJECT TALENT
5
CALIFORNIA

Curriculum for the Special Summer Session: Third Grade

If acceleration, as conceived in this project, is to provide the educational advantages inherent in the program, curriculum experiences must be adapted to particular children in particular classes. The content, the class schedules, and the lesson sequences the teachers plan in advance should reflect the uniqueness of gifted children as a group. The summer program offers the teacher a chance to innovate--to introduce an enriched curriculum of the kind that is specifically appropriate for an atypical third grade class--the intellectually talented.

The gifted children who participate in accelerated programs will be generally superior to their grade peers in academic achievement, slightly above age norms in social competence, and very similar to age peers in physical development. As individuals, gifted children reveal many of the same problems the school encounters in normal population groups. Some reveal poor spelling or gaps in number facts; some lack motivation for academic learning. Teachers who work with this kind of group for the first time often express surprise at the range of performance they discover whenever performance in some specific skill is analyzed. Children who participate in accelerated programs, although gifted, remain individualistic.

Curriculum guides, samples of children's work, and lists of teaching materials are useful as resources, but the teacher must apply such guidelines within the limits of the summer session and in a manner compatible with the needs of individual pupils. Modification and innovation based on the individual skills of the teacher are important aspects of creative teaching. The materials identified in this chapter have been developed with these kinds of adaptations in mind. Some key considerations in planning for bright pupils who are to move from the second to the fourth grade via the special summer program are presented in the following statement of purposes.

Goals for the Summer Program

Transition from Primary to Upper Grades

Third grade is a period of transition. Children are moving from manuscript printing to cursive writing. Extreme variability in handwriting skills, which seem to have little relationship with intelligence quotients, is usually noted in acceleration classes. Differential development of small muscles and eye-hand coordination as well as training and practice will affect the level of skill and speed of writing that individual children will have attained. Such variation is normal, and some children may take longer than others to write easily and well, especially when expression of ideas is being emphasized. They will need considerable opportunity to learn how to "think on paper"--to use written language as a form of communication.

Prior to entering the third grade, many of these children will have been largely dependent upon teacher direction. The development of independent study skills will be a new experience for some pupils, and the teacher will need to be supportive while they achieve independence. Many intellectually gifted children of this age find communication with peers more difficult than with adults and must learn social skills their classmates already practice automatically.

On the whole, achievement may be lower in arithmetic than in reading because less time is given to arithmetical content at first- and second-grade levels. Much new material is presented in mathematics at the third-grade level, so individual analyses should precede the mathematics programs.

Social science in the third grade may provide the first experience with history and geography--with other times and places, with comparisons between communities. Prior to this, focus probably will have been largely on the family and the neighborhood. The summer curriculum can build bridges to larger environments. Careful selection of content can prevent repetition in the fourth grade and provide learning experiences that are consistent with the larger framework for social sciences. Although children in California have much cultural heritage and history in common, local curriculum guides need to be projected against the broader sweep of time and civilizations.

Many districts begin to emphasize team sports in the third or fourth grades; therefore, physical education becomes particularly important in the summer program. Children who learn to participate effectively develop an interest in physical pursuits at a time when peers value physical proficiency. This may be a crucial area for boys when they enter the fourth grade, according to the research that identifies the role of team sports as important to peer acceptance of accelerates. All children should have directed opportunities to develop physical and athletic abilities.

Adaptations of Basic Curricula for Gifted Individuals

Mentally gifted children tend to be highly proficient in verbal and quantitative skills compared with most other boys and girls. Although most gifted children are academically oriented, they may be quite diverse in cognitive styles, physical development, mechanical abilities, self-image, expressiveness, and creative productivity. Characteristics that were found common to most gifted children in the acceleration demonstration classes were the following:

1. Ability to concentrate
2. Ability to manipulate abstract concepts
3. Tendency to be competitive
4. Desire for high achievement
5. Tendency to be adaptable
6. Sensitivity to physical environment
7. Sophistication in social behavior
8. Unusually perceptive
9. Easily motivated

Pupils in acceleration classes at the third-grade level showed wide variability on items of the following kind:

1. Creativity
2. Imagination
3. Perfectionism
4. Independence
5. Risk-taking
6. Self-esteem
7. Satisfaction from academic pursuits
8. Satisfaction from physical activities

More data in the nonintellectual dimensions are needed to understand better the populations in the various accelerated groups. Teachers can provide more appropriate curriculum if they know both the pupils and the aspirations their parents hold for them.

Provision for Physical Activity and Sociopsychological Development

Although "gifted" pupils in the second grade may be precocious in academic development, they are children with needs apart from intellectual satisfactions. Early emphasis on intellectual development need not deprive children of opportunities for physical activity and social-emotional development.

Childhood culture has its own rules, its own definition of loyalty, and its private value structure. Whereas primary school children often imitate adults, they begin to develop independent identity and greater objectivity about the time they enter the middle grades. Peer society provides an opportunity for children to prove they can live with people outside the family. However, children must learn not to be subservient to the group and, when rejected, to return temporarily to the security of identification with adults. Interaction with peers tends to help children develop a stable identity, a sense of humor, and confidence in their own ideas and opinions.

Pressures should not be so strong in one curricular area as to interfere seriously with development in other areas. At the core of each personality is the child's own perceptions about his abilities, which may be more vital in motivation and performance than the teacher's perceptions. The things a child finds satisfying and chooses to do may have more effective motivational force than what the teacher wants of him. Further data on nonintellectual characteristics should help teachers to utilize the social-emotional-attitudinal components that operate in any learning situation and thus to help teachers enhance the development of intellectual potential.

Involvement in Higher Intellectual Processes

To devise ways of analyzing children's concept formation is vitally important in the education of all children. With gifted children, who can learn quickly and are able to manipulate verbal materials with ease, the danger is that concept formation may be assumed when, in fact, the children may be merely using words they do not fully understand.

Reaching a higher level of intellectual functioning is not synonymous with using more advanced vocabulary, although the two abilities should develop simultaneously. Bright children may be able to verbalize fluently, but limited or even erroneous meanings may to attached to the symbols they use. Such skills and abilities as being able to see relationships, to analyze, to categorize and classify, to think divergently, to sympathize, to formulate hypotheses, to evaluate ideas, and to arrive at sound generalizations are major curriculum concerns if children are to become effective and innovative as problem solvers.

Teachers develop effective thinking in pupils through the kinds of assignments they give and the kinds of questions they ask--that is, by structuring the thought processes they demand of children. The model the teacher presents and the level of performance that is rewarded will influence performance in the future. If the teacher encourages independent thinking and inquiry, children will learn to use the factual content they acquire to function at higher levels.

Any of several intellectual constructs might be selected as a framework to plan curriculum and to evaluate learning. Wilson and Robeck formulated a learning-motivation theory that enables teachers to observe and develop three levels of learning: association, conceptualization, and creative self-direction.

They discuss the three levels in their book, Kindergarten Evaluation of Learning Potential; A Curriculum Approach to Evaluation.[1]

Other sources that may be used by the teacher to raise the level of children's thinking are Bloom's Taxonomy of Educational Objectives: Cognitive Domain[2] or Bruner's Toward A Theory of Instruction.[3] When the emphasis is on attitudinal change, certain lessons might be structured on Krathwohl's Taxonomy of Educational Objectives: Affective Domain.[4]

Structure of Intellect

A model for learning which became available during the last decade, J. P. Guilford's "Structure of the Intellect," shows the relationship between various factors of human intelligence.[5] His construct was implemented in California Project Talent. Many people interested in raising the level of intellectual functioning in gifted children see this structure as applicable to the school setting.

This resource guide focuses on the thinking processes gifted children can develop as they study any of the topics selected for third grade curriculum. In Guilford's first dimension, operations, or what he calls the "major kinds of intellectual activities," are cognition, memory, divergent production, convergent production, and evaluation. That teachers of gifted students can function effectively within this framework was demonstrated repeatedly in the project workshops. An assumption, verified in a limited way by project observers, is that the conscious application of a well-conceived theory of learning is more likely to result in the development of important kinds of thinking power than unstructured teaching approaches--intuitive or incidental. Since the Guilford structure was implemented only recently as a framework for curriculum planning, the categories in the operations' dimension are summarized and illustrated for those who may be unfamiliar with them.

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[1] John A. R. Wilson and Mildred C. Robeck, Kindergarten Evaluation of Learning Potential; A Curriculum Approach to Evaluation (Second edition). Santa Barbara, Calif.: Sabox Publishing Co., 1965, pp. 24-38.

[2] Taxonomy of Educational Objectives, Handbook I: Cognitive Domain. Edited by Benjamin S. Bloom. New York: David McKay Co., Inc., 1956.

[3] Jerome S. Bruner, Toward a Theory of Instruction. Cambridge, Mass. Harvard University Press, 1966.

[4] David R. Krathwohl, Benjamin S. Bloom, and Bertram B. Masis, Taxonomy of Educational Objectives, Handbook II: Affective Domain. New York: David McKay Co., Inc., 1964.

[5] J. P. Guilford and P. R. Merrifield, "The Structure of the Intellect Model: Its Uses and Implications," Reports from the Psychological Laboratory, University of Southern California. Monograph Number 24, April, 1960.

Cognition. In the present context, operations are the five kinds of intellectual activities or processes by which the child deals with basic information. "Cognition" means comprehension, understanding, discovery, rediscovery, or awareness in the intellectual sense. Teachers historically have tried to develop lines of questioning that lead students to the brink of an idea, an answer, or a conceptualization. Although teachers have viewed the learning process differently, they have seen the need to involve the learner in the process.

Recently many researchers, including Suchman through his inquiry studies, have been concerned with the level or quality of the cognitive experience.[6] Most teachers try to anticipate and provide for the kind of understanding that assures key concepts or significant facts will be remembered. In attempting to develop cognition in children with high IQs, teachers have come to recognize the need for certain precautions.

When teaching for cognition, the teacher must be aware that restatements of information do not necessarily indicate cognition. Most children who are identified as mentally gifted remember words easily and verbalize readily. The tests that are used most commonly to identify the academically talented are heavily weighted with recall and memory items. The point to remember is that cognition is the process of understanding, not merely verbalization.

A second observation is that gifted children, as a group, are highly dissimiliar in cognitive abilities. In any specific intellectual function, special classes may show a greater range of variability than a typical class of the same age group. Their teachers quickly learn to observe while they teach so that before a lesson is ended the teacher knows which individuals do or do not understand the important ideas.

The third point is that information understood is not always information remembered. Discovery methods of teaching which are highly effective with most children and most content are particularly so in the education of the academically talented.

Memory. "Memory" involves the retention of knowledge in the form in which it was learned, together with the ability to recall the information as needed. The preceding paragraphs imply that the quality of the cognitive experience can improve retention, and certainly the nature and extent of the learner's involvement influence the availability of that knowledge. Most of the tests that identify children for special classes sample memory abilities at several points. The Stanford-Binet tests, for example, measure the memory for designs, bead chains, digits, names, sentences, and stories. A high proportion of the instruction time in schools involves the student in memory operations. Very few pupils appear in programs for gifted children who do not show superior retention and recall abilities.

Many teachers of superior pupils have found many ways to involve them directly in learning about the learning process--in learning how to organize information for effective retention, for example. The summer session teacher might discuss with the class how individual children learn certain material most effectively. When children have become relatively independent in the memory operation, class time may then be used--not to acquire content per se--but to function in those operations that make use of information or knowledge.

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[6] J. Richard Suchman, "Learning Through Inquiry," Childhood Education, XLI (February, 1965), 289-91.

Divergent Production. In the Guilford model, "divergent production" is closely related to creative thinking. This is the process in which the individual generates new ideas or materials with emphasis on variety, uniqueness, or quantity in his responses. Children high in this ability may be expected to show sensitivity to problems and also to pose many possible solutions. They readily depart from conventional or habitual solutions to the original and the untested. To assure that children function in this operation, the special summer teacher should emphasize imaginative self-expression and reinforce spontaneity and fluency. Usually he should defer judgment and criticism to a later time.

Convergent Production. "Convergent production" is a thought process that makes use of given information to generate a single correct or best answer. Like divergent production, this is productive thinking. A new answer is produced--unique at least to the individual but one which is predetermined by the problem situation or the information given. One example of convergent thinking on the part of a child is the formulating of a generalization of a concept from several related experiences. Problem solving in mathematics may be convergent thinking if the student devises an acceptable process which leads to a "right" answer. On the other hand, he may merely be using steps he learned previously to practice a series of subtraction examples, in which case his intellectual operation is memory rather than convergent production.

Evaluation. "Evaluation" is the process of making judgments based on some criterion or set of criteria. That decision making be based on consistent standards is important in this operation's category, whether the standards are imposed by the school or whether they are developed by the class. Recently Guilford stressed evaluation as a recurring function intermingled with cognitive and productive thinking.[7] For example, the recognition of a problem (cognition) might be accompanied by the decision based on individual goal satisfaction (criteria) to formulate several hypotheses (divergent thinking). Known factors related to the problem might be recalled (memory) and considered (evaluation), and appropriate (evaluation) new data might be gathered (cognition).

The extent to which children become active learners who formulate concepts efficiently and interpret the world perceptively will influence the nature and extent of their productivity. To define learning as an active search implies a different school program than that which emphasizes the retrieval of information. The tendency should be resisted to provide curricula that simply give bright children greater amounts of material at earlier ages and at a faster pace. The risk in demanding that children spend a majority of their effort to assimilate information means they must rely on someone else's value judgments. Such forces might serve to limit rather than develop the cognitive functioning of pupils. They need time to think, to reflect on experience, to begin to deal with life, and to discover values.

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[7] J. P. Guilford, "Models for Human Problem Solving." A Report Distributed to California Project Talent Staff Meeting in Los Angeles (September 14, 1964).

Development of Creative Talents

The Guilford theoretical structures for learning included a category that he described as creative behavior. Guilford-Merrifield thought of "divergent production" as essentially fluent, flexible, and imaginative. Wilson-Robeck conceived creativity as self-directed activity which went beyond the learner's immediate cognitive world. Whatever the teacher's own view about the development of creativity in children, the following guidelines may be useful:

1. Reinforce divergent behavior by recognizing originality and by reacting meaningfully to what the child is trying to produce.
2. Provide materials and situations that have the potential for manipulation and discovery.
3. Teach the techniques that are needed to assure a satisfying experience.
4. Value unique production--that which shows how the child sees the world and how he feels about others.
5. Extend originality, initiative, and creative behavior to all possible activities--mathematics, social science, and the like.
6. Separate "idea generating" from "critical judgment" situations; be sure pupils know whether divergent or convergent production is suggested.
7. Teach pupils to identify the essential areas of conformity and adherence to conventions, especially those that cost little or nothing in the productivity of the individual.
8. Schedule a regular period when children have the opportunity and the responsibility for activities of their own choosing.
9. Create an atmosphere that nurtures constructive individuality and expressive behavior.
10. Teach children to live richly--to hold out both hands to new experiences, to learn that pleasure comes with bringing together a new combination of words, or colors, or symbols.

Balance of Skill Development and Enrichment Functions

Young children have been exposed to relatively few areas of endeavor and have limited appreciations and values. The functions of a balanced curriculum are to broaden a child's interests and to provide maximum stimulation in many kinds of content under conditions of minimum pressure and tension. Children's competencies in skills should be developed to the utmost, but opportunities should be given also to provide multiple avenues for expression and action.

The brevity of the summer session requires that both skills and the content of science and social science be integrated. Basic skills, as the tools of learning and thinking, can be taught as needed. The teacher observes the weaknesses; then he gives specific kinds of help to individual pupils. Art, music, and physical education activities can be integrated into other units of work. Efficient learning can result when the relatedness of content is utilized. In the basic skill areas, it is important to determine what each child knows in relation to what he needs to know to feel adequate in a class at the fourth-grade level. To select the significant content and skills and to design the appropriate checks will demand ingenuity on the part of the teacher. Concern should be with the quality of experience. Although some rote learning will be necessary, complete reliance on this approach is impractical in a short summer session, as well as inappropriate for bright children. Some self-evaluation as the session progresses will tend to put some of the responsibility for learning on pupils, most of whom enjoy this responsiblity.

It is important to clarify objectives relative to each area of content. This serves to simplify the teacher's task and establish criteria for lesson planning.

Summary of Purposes

For all children who will be accelerated to the fourth grade, the special summer program should accomplish the following objectives:

1. A confident transition from the primary grades to the fourth grade, with demonstrated ability in all critical areas, both academic and social

2. A positive attitude toward school which results from adaptations of basic school curricula to the learning characteristics of gifted children

3. The development of abilities other than intellectual that are consistent with the physical and sociopsychological needs of this age group

4. The involvement in intellectual functions that enhance cognition, conceptualization, and evaluation

5. An increased aptitude for, and satisfaction in, creative self-direction

6. A balanced summer curriculum that strengthens the skills needed in the fourth grade and that extends student interests in social and scientific problems

Selection of Content

Experience in the demonstration centers, where prototype programs in acceleration were established, pointed toward two principles for the selection of curriculum content: (1) accelerants had a good chance to feel secure in the fourth grade if all the immediate and conspicuous skills had been mastered; and (2) special summer grouping was conducive to esoteric classroom interaction when a different kind of enrichment curriculum than that arranged for average and slow learners was provided.

Accordingly, the outlines of subjects and topics to be taught were divided into two categories: (1) minimum skills needed for entrance into the fourth-grade curriculum; and (2) specialized enrichment content in language and art, social science, science, and physical activities. By this division of skills and enrichment content, the teachers in the special summer session were able to analyze and to teach the most critical skills: reading, mathematics, spelling, and handwriting. They were able to provide for variability within and between pupils by using a unit approach to teach the remaining curriculum areas as enrichment experiences. This arrangement of content enabled the pupils to get the necessary background during the six-week session for accelerated placement in California Project Talent.

Minimum Skills for Grade Three

Frequently a group survey test that covered skills in reading, mathematics, and spelling at the third-grade level had been given in advance to summer session pupils. Metropolitan Achievement Tests, California Achievement Tests, and Stanford Achievement Tests were used in various districts where acceleration programs operated. Children whose scores fell at or above the 95th percentile on national or local norms were so near the ceiling on primary level tests that additional measures were needed for planning the curriculum. Wide Range Achievement Tests (Jastak, 1946) were found useful as a guide for materials selection because of the high ceiling on this instrument. Group achievement tests for upper elementary school children, such as the Iowa Test of Basic Skills, might have been used also to survey reading and spelling needs. Gifted children in the second grade usually have not learned the processes necessary to achieve at markedly advanced levels in mathematics; therefore, arithmetic tests that sampled mathematics processes were devised by the teacher or were selected from workbooks.

Analyses of pupil achievement were needed to organize the daily instruction. These were acquired in the early part of the session as the teacher assigned tasks that revealed each student's level of accomplishment. Short analytic quizzes were preferred rather than long batteries of tests administered in close succession. Comprehension and word recognition skills were observed in both oral and silent reading situations. A spelling list of Dolch's 220-word service vocabulary, taped in a series of ten lessons, was prepared by one teacher and became a practical basis for analysis of spelling ability. Writing instructions for spelling tests and illustrative sentences were included on the tapes and were used by small groups of children at the listening post while the teacher worked with other groups. Any of the Phono-Visual diagnostic spelling lists has value for spotting gaps in sound-letter association and can be administered to the whole class in one lesson.

Work sheets that covered the addition and subtraction facts were given--usually under circumstances that permitted the teacher to watch for unusual approaches to mathematics, such as excessive use of props. The understanding of mathematics strands at the second-grade level needed to be determined in the session by using SRA or one of the new supplementary adoptions.

The children screened for this program usually achieved far beyond the third-grade level in most skills, and unnecessary repetition was boring to them. Some children were motivated to perform at a high level on standardized or review tests, but their daily work did not reflect comparable knowledge or drive. Here the social science and science programs provided the problems for applying basic tools of communication and computation and the motivation for learning routine skills. The teacher's observation of a student's work was in some cases a more valid evaluation of the student's potential success in acceleration programs than his level of performance on intelligence tests.

Efficiency in learning the skills was critical because of the calendar limitations of the summer program. The skills were taught quite differently for gifted classes in summer session than for conventional third-grade classes. In retrospect most special classes teachers concluded that such an assignment was the most stimulating, challenging, and exhausting of their teaching experience. To avoid teaching what children already knew, individual needs were analyzed, gaps or low points in skill development were taught in small groups, and continuous self-evaluation by pupils became a routine. Making use of the pupil's cumulative folder, the teacher studied individual records for clues to major adjustments in curriculum content and secured special materials that were needed for the individual students. Test results provided the teacher with knowledge of the areas that must be stressed with the group as a whole.

An outline of basic skills to be covered was given to parents, and it formed a background for guidance if home help was recommended. Bulletins or class newspapers gave further information and suggested ways the parents might encourage the child and supplement his experience. Individual parent contacts regarding school problems usually resulted in a concerted effort to help the child overcome any learning gaps that threatened his success in the fourth grade. Such communication activities tended to build confidence in parents concerning the child's preparation for advanced placement.

Another step toward efficiency in development of the individual as a learner was to place on him an increasing responsibility for his own success. Most of the children in an acceleration program are highly motivated to achieve in school; therefore, they want to know how to learn on their own. The teacher might say, "These skills are necessary for the fourth grade; what do you think would be the most rapid and efficient way of learning them?" The individual child developed ways of studying and drilling that were effective for him, as well as an awareness of his individuality as a learner. After these kinds of school experiences, the children were ready to assume some responsibility for routine content.

Checklists were used informally but systematically. Children kept records by means of graphs, folders, and notebooks. In many situations they corrected their own papers and checked their own learning achievements against a scale or criterion devised by the group. Reading with another child, pairing off for practice work, and testing one another resulted in increased involvement and participation. Self-evaluation forms were developed for book reports, science experiments, and handwriting.

The use of programmed and self-explanatory learning materials saved teacher time and allowed children to work independently. Most of the special materials were selected at the fifth-grade level--consistent with standards in California Project Talent that enrichment begin two grades above standard curricula. For example, the SRA kits on spelling, reading, and graphs and charts were used to take children systematically through some important skill areas. One teacher of an accelerated class used a file of science experiments that the pupils could prepare independently and demonstrate to the class. The use of such aids gave the teacher added freedom to work with individual pupils.

An assistant teacher, even on a part-time basis, was found to be helpful in many ways. In the beginning, both of the demonstration centers functioned successfully with one classroom teacher and 24 to 32 children in each class. After the second summer, Pasadena City Unified School District cooperated with California State College at Los Angeles in their training program for teachers of gifted children by receiving observers from college classes and providing classroom experience for fellowship teachers. After the second year, Ravenswood City Elementary School District also enhanced its program by employing a full-time teacher's aide for the summer session. The advantages to children were numerous. For example, an assignment given early in the morning could be corrected and returned to the pupils for analysis on the same day; this practice helped to eliminate repetition of errors, to capitalize on current interests, and to reinforce productivity. Two small seminar-type sessions could be held simultaneously. The assistant teacher met with study committees, took small groups to the library for research, prepared summaries of children's progress, explained the program to visitors, prepared charts, wrote anecdotal records, secured supplies, and prepared materials. Fellowship teachers made an important contribution to the Pasadena summer session by teaching subgroups during the skills period and by planning activities within the science and social science curricula.

Efficiency in learning can be increased through attention to nonintellectual components inherent in all lesson situations. A teacher who is aware of children's social-emotional attitudes, feelings about self, and motivational tendencies is better able to plan challenging experiences for them.

As pupils advance to intermediate grades, success in the various subject matter areas is contingent upon pupils' having a firm grasp of fundamental skills. Therefore, nearly half of the time schedule in the summer program was allotted to systematic teaching of reading, mathematics, spelling, and handwriting skills. Children selected for acceleration varied in the extent to which they had mastered the fundamentals. Most accelerated children had attained skills beyond the fourth-grade level in most areas; however, pupil frustration and teacher concern still existed when a child had not mastered some isolated process. The sections that follow provide an outline of minimum standards for the third-grade skills, together with illustrations drawn from staff experiences in the demonstration centers. Particular attention is given to the curriculum adaptations that were made for summer session classes composed both of gifted children enrolled for enrichment and third grade placement and gifted children enrolled for acceleration to the fourth grade. Further examples are given of the level of instruction in classes composed only of advanced placement students who already have been taught some content at the third-grade level within gifted cluster groups of the second-grade level.

Reading. The screening procedures recommended for the reading program all but eliminate the chances of receiving a candidate for acceleration who is not an independent reader. However, the range of pupil performance in SRA fifth-grade kits may--and often does--extend from the lowest to the highest color levels. A wide range in reading ability is likely to occur when the class includes candidates for enrichment who are not in the acceleration program.

Selection of reading material must be made at the local level and will be based on the makeup of the special class. If the program includes pupils who will be assigned to the third grade in September, the teacher may wish to use supplementary rather than basic adoptions in reading. If SRA reading laboratories are part of the regular program, the "umbrella" elementary kit may be purchased. Challenging reading material will need to be obtained for those pupils who read independently beyond the fourth-grade level if they are to realize satisfaction from word analyses and vocabulary study.

The Pasadena Demonstration Center, which identified candidates for acceleration no later than the first grade, began enrichment of content within cluster groups in the second grade. All these children were scheduled for placement in the fourth grade when they enrolled in the special summer program. Mrs. Sally Patton, the teacher, selected basic third-grade materials for the first special summer session. The Ginn and Co. textbooks, Finding New Neighbors and Friends Far and Near, were used with the accompanying workbooks. Pupils were tested with the Ginn Basic Reader Achievement Tests (Third Reader I and Third Reader II) to diagnose needs and measure progress. Supplementary textbooks, which were used as time permitted, included the following: Open Roads (American Book Publishing Co.), Fun All Around and Treat Shop (Charles E. Merrill Books, Inc.), and Into the Wind and Across the Valley (Holt, Rinehart, and Winston).

By the third summer, selection criteria were refined, and the reading program was more flexible, as indicated in Mrs. Patton's report:

> Children's reading ability was excellent, both in fluency and comprehension. No formal reading program or work type reading was used. Our Indian unit provided reading material in the content field; the science units did this, too. Leisure reading and selected literature materials were available and these

children read avidly on their own. Reading in the content field provided an opportunity to observe comprehension skills.[8]

Mrs. Pauline Ahlemann, Demonstration Teacher for the statewide California Project Talent Summer Workshop, taught a class of 25 children, 18 of whom were enrolled for enrichment rather than acceleration. The divergence in her group is revealed in her description of the reading program:

> Within a class of this type, the reading levels were so diverse that it was thought best to use an individual program of some type; therefore, the SRA Reading Laboratory IIa was chosen. The complete program was followed, including the use of the rate builders, power builders, listening skill builders, and progress charts. At the beginning of the third week, the SRA Pilot Library IIa was also introduced. The children began reading these books after completing a required power builder each day. Many of the children also found time to read from other library books which were available to them. However, several were so anxious to "move up" in the SRA that they used their extra time to do additional power builders. During our literature periods, members of the class were encouraged to review briefly the library books which they had completed. Soon they became very adept at telling just enough of the story to entice others to read the book. This period was also used by the instructor to read many stories and poems to the class. Several periods were spent on choric speaking, which the children seemed to enjoy.[9]

Specific word study skills should be included in curriculum planning and should require the student's independent use of one or more of the following steps as needed for successful word attacks on the fourth-grade or higher levels of reading vocabulary:

1. Word recognition (context clues, basic sight vocabulary)
2. Word meaning (selection of appropriate definition from several alternatives)
3. Phonetic analysis (consonants, vowels, phonograms, diagraphs, left-to-right attack)
4. Structural analysis (word roots, plurals, compounds, contractions, possessive words, suffixes, prefixes, variant forms of verbs)
5. Dictionary facility (guide words, pronunciation key, synonyms word derivations, accents)
6. Syllabication (rules that are highly consistent)

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[8] Sally Patton, "Observations and Recommendations," A Report to California Project Talent by Special Teacher, Acceleration Demonstration. Pasadena, Calif., November 15, 1965.

[9] Pauline Ahlemann, "Ungraded Primary and Planned Acceleration Demonstration," A Report to California Project Talent by Special Teacher, Acceleration Demonstration. Sacramento, summer, 1965.

The teacher will need to be highly selective if word-attack skills are to be covered in five or six weeks. A test that covers the most essential skills, such as the Roswell-Chall Diagnostic Tests of Word-Analysis Skills, might be used for some people. Although this test must be administered individually, it has the advantage of being thorough, usable by the teachers or trained assistants, and available in more than one form.

A desirable teaching method is that in which the class or subgroup is first provided with several examples of a rule-of-thumb or a principle for word attack. Using these specifics, the teacher next motivates the class toward the discovery and the formulation of the principle involved. As a final step, the generalization or principle is tested. This procedure enables the bright child to learn the process in addition to the principle and in the future to discover much on his own about the structure of language.

Syllabication can also be taught as a series of principles the children formulate. Examples are best drawn from the reading matter at hand. Even though exceptions occur, the child has a plan of attack available as he reads.

Teaching word-attack principles to superior readers is sometimes difficult because most of these children have learned, usually at an early age, to function with a good memory for sight vocabulary and have acquired a few self-discovered principles for word attack. Some intellectually superior pupils who were generally superior in reading rate and in comprehension tests were observed to be ignorant of many of the important word-recognition skills, perhaps because they were working successfully without them at all levels of difficulty encountered in the second grade. At a later time when these same pupils encounter difficult material with terminology outside their speaking vocabularies, they will need the five major word-recognition skills and the ability to select the most efficient approach for each word-attack situation. The teacher's task is to create an awareness of the need for the full complex of reading tools, together with a procedure for pupils to learn to use them on their own. Materials for this purpose must be used at an instructional level, providing the challenge of unlocking a new and unknown vocabulary. When the teacher ties instruction to need and uses discovery techniques, which students can later apply on their own, learning word-recognition skills is inherently rewarding and reinforcing for them. Gifted groups were observed to work with great enthusiasm when learning the skills of sound-letter association, word structure, and syllabication.

It should be emphasized that the techniques of word recognition represent but one step in the reading process. They are merely the mechanics whereby pupils gain meaning from the printed page. Learning to read is a goal of the skills program; reading to learn should be the goal of any reading program.

Special session teachers usually developed research skills along with other work in the science and social science units. The library and reference skills were learned quickly by most gifted children, especially when instruction was accompanied by their desire to learn. The reading activities listed in the "learning activity" column of the accompanying chart, "Classification of Selected Reading Skills Within Bloom's Taxonomy," were within the ability and academic level of most students in the special classes. The "educational objective" column

Classification of Selected Reading Skills Within Bloom's Taxonomy

Learning activity	Educational objective
Taking notes based on reading	Knowledge (of terminology)
Recalling information	Knowledge (of specific facts)
Using the table of contents	Knowledge (of ways and means)
Observing punctuation in oral reading	Knowledge (of conventions)
Following printed directions	Knowledge (of sequences)
Locating information through use of the index	Knowledge (of classifications)
Reading critically to check information with facts	Knowledge (of criteria)
Preparing a bibliography using library resources	Knowledge (of methodology)
Reading pictorial maps, graphs, tables	Knowledge (of abstractions)
Pronouncing new terminology by selection and application of the principles of word analysis	Knowledge (of principles)
Classifying and categorizing books read	Knowledge (of structure)
Choral reading of poetry or verse	Comprehension (translation)
Skimming to determine nature of content	Comprehension (interpretation)
Telling or writing the end to a story	Comprehension (extrapolation)
Charting or graphing data or information	Application
Identifying the motivations of characters in a story	Analysis (of elements)
Organizing and summarizing notes from several sources	Synthesis
Expanding the range of books read	Evaluation
Judging self-progress on pupil evaluation scales	Evaluation (external criteria)

in the accompanying chart indicates an educational objective in the terminology of the Bloom taxonomy that can be accomplished if the gifted pupil functions at a level consistent with his intelligence.

Mathematics. During the three-year demonstration project, new state adoptions in mathematics were made, and consequently California Project Talent children were given third-grade level curricula that followed the "strands" concepts.[10] All summer programs in the centers and at the workshop used this basic textbook: Greater Cleveland Mathematics Program.[11] In classes where some gifted pupils were enrolled for enrichment only, a better choice might have been the supplementary textbook, Modern Arithmetic Through Discovery.[12]

Mrs. Pauline Ahlemann, Demonstration Teacher for the statewide California Project Talent Summer Workshop, described her program in mathematics:

> The first objective of the mathematics program was to determine the strengths and the weaknesses of the children and to offer help where weaknesses were found. The instructor administered individually the Formal Arithmetic Processes Test, which was reproduced from the state study.
>
> Another objective was to introduce the language and approach of modern math, with special emphasis on those concepts with which children going into the fourth grade should be familiar.
>
> Some of the concepts presented were:
>
> Inverse operations
> Inequalities, including the symbols for "greater than" and "less than"
> Commutative property of addition
> Associative property of addition
> Commutative property of multiplication
> Numerals and numbers
> Geometric concepts of point, line segment, line, ray, angle, circle
> Measurement of feet, inches, half-inches
>
> A third objective was to have fun with mathematics. Whenever possible, the instructor used the inquiry approach, drawing from the class as many ideas as possible. Then the more formal and precise terminology was introduced. The number line was used to find the results of addition, subtraction, and multiplication operations. As one of the "fun" activities, the children were introduced to Maneuvers on Lattices, a University of Illinois Arithmetic

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[10] "Strands of Mathematical Concepts," California Mathematics Council Bulletin, XX, (fall, 1962).

[11] Greater Cleveland Mathematics Program. Prepared by Educational Research Council of Greater Cleveland. Chicago: Science Research Associates, Inc., 1964.

[12] Robert Lee Morton and Others, Modern Arithmetic Through Discovery. Morristown, N. J.: Silver Burdett Co., 1964.

Project. They enjoyed these lessons and were soon able to find, quite rapidly, the results of rather lengthy and involved maneuvers. Another favorite mathematics activity was geometry. The children drew geometric shapes, which showed a very good understanding of the ideas presented.[13]

Mrs. Patton used the Greater Cleveland Mathematics Program for children of the 1965 summer class; she described the children in this way:

> The children in the class were from three different schools and their preparation varied. For example, one group of children received instruction in the multiplication tables through the 11's, another group knew multiplication through the fives, and the other groups had learned the fours. Each summer it was noted that the greatest divergence in preparation was in the area of mathematics.

The summer session teacher should be aware of the key topics or major mathematical strands that are begun prior to the third grade--as well as the additional computational and problem-solving skills of the third grade--and ensure their acquisition by the pupils.

Library books on mathematics were selected to include material for independent use by the child who was mathematically sophisticated and highly abstract in his thinking as well as by the child at the other extreme who had developed little interest in mathematics.

Spelling. Project children showed great variability in spelling skills. The use of the listening post to check the spelling of Dolch's service words has been mentioned. A knowledge of these words, needed frequently in reports and in imaginative writing, was found helpful in summer session as well as in work in the fourth grade. Some teachers devised spelling lists of words that were needed for day-to-day tasks; some teachers used the SRA spelling laboratory (IIb) for the fifth grade. All teachers planned spelling lessons that supplemented other language experiences and offered materials that were different in kind from those used for reading instruction.

Cursive Writing. Usually the pupils had made the transition to cursive writing by the time they entered the summer session, but many still preferred to use manuscript. The teacher of one class reported, "Transition to cursive handwriting was a stumbling block to this group and caused frustrations. These children were accustomed to easy success in their academic subjects, and mechanics of handwriting inhibited them. Constant inquiry concerned whether manuscript writing could be used."

If cursive writing were introduced and used in the program according to the child's readiness and maturity, some exceedingly brilliant children would enter the fourth grade as printers. In spite of the good sense that this might make, from the point of view of the child and the school, immature or poor handwriting would tend to make the child conspicuous in the eyes of his peers in the fourth grade. Fortunately most potential candidates for acceleration are taught to use cursive writing in the second grade. A wise teacher of the fourth grade will permit each pupil to use the form in which he has the greatest facility whenever original work is required of him.

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[13] Educational Programs for Gifted Pupils. Sacramento: California State Department of Education, January, 1961, pp. 246-49.

Typewriters were used with notable success and enthusiasm by some children. Although the solution was satisfactory for summer programs, writing skills remained a problem in the early months of the fourth grade. Both referring and receiving teachers need to give some children special help and understanding in this area.

In working for improvement, criteria can be formulated by the class; e. g., the $E+S^3$ formula: effort plus style, slant, and spacing. Self-evaluation and comparison with one's previous work or a handwriting scale are usually more effective than redoing laborious work. The six-week session is not long enough to complete the state program for the third grade, but appropriate lessons may be selected for individual children as their progress indicates.

Enrichment Content

In the limited time that is available in the summer session, usual types of curriculum are neither feasible nor desirable. Nearly all candidates for acceleration are superior in the mechanics of language usage, in scientific information, and social sensitivity. They need to learn new forms of creative expression, to find new reading interests, to locate and use library resources, to define and test their observations of natural phenomenon, and to gain a positive and confident attitude toward new experiences in school. The six-week period appears adequate for these purposes if the child is both intellectually gifted and near the maturation level for the fourth grade.

Language, art, and physical education were taught in most classes as regular activities, related at times to a unit or body of content. Some of the ways this learning was incorporated into the total enrichment program are described in this section. Science and social science were taught as units of study in both demonstration and workshop classes. Most of the teachers selected a part of the regular curriculum framework for social sciences and then correlated it with one or more relevant topics in science. At least one teacher developed the major unit in science and incorporated the citizenship goals and some local geography into the program.

Science. As the basis for planning the unit on science, Pauline Ahlemann used the resource guide, "What Am I? A Unit on Human Physiology."[14] The incubation of chicken eggs was used as the motivation and point of departure for an elementary school level of comparative embryology. "This approach resulted in a rewarding and fascinating classroom experience," according to the teacher, who directed the children as they watched chick embryos grow from a life almost too small to be seen to a peeping ball of fluff. Many generalizations were made; the following are some examples:

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[14] "What Am I? A Unit on Human Physiology." Developed by the Elementary School Science Project, University of California, Berkeley.

1. Almost all animals come from an egg--even you!
2. We grow in many ways; we grow even before we are born.
3. Fertilization of the egg and growth of the embryo can take place.
4. During the early stages of development, there is a great similarity between the chick embryo and that of other animals such as fish and mammals.

Mrs. Ahlemann described the program in this way:

> During the incubation period, two children were appointed to turn the eggs, check on the temperature, and see that there was plenty of water in the incubator each day.
>
> As an important part of the study, an egg was opened every third day and the embryo was preserved. The children examined the embryo carefully, using a magnifying glass during the early stages, to see what changes had taken place during the intervening days. Each new stage of development was noted with interest. The possibility of eggs not being fertile was mentioned early in the study--even though the eggs had been obtained from a hatchery--so the class was not too surprised when, on the ninth day of incubation, the egg that was opened showed no development at all. Another egg was chosen and when it was found to have a developing embryo inside, a sigh or relief went up from the children.
>
> The following materials and visual aids were used:
>
> Resource unit from the University of California
> Leaflets from Poultry Embryology Project, College of Agriculture, New York State
> Book: Millicent E. Selsam, Egg to Chick. International Publishers Co., Inc., 1946.
> Motion Pictures: Animals Growing Up (11 min. b&w) Office of the Sacramento County Superintendent of Schools Audio-Visual Library:
> Baby Animals (10 min. b&w)
> Mother Hen's Family (11 min. b&w)
> Red Hen (11 min. b&w)
> Filmstrips: From Eggs to Chicks
> Mother Hen
> Britannica Junior Encyclopaedia
> Home reference sources
>
> Equipment was devised from simple sources, including a brooder constructed of a large, heavy cardboard box with dropcord and light. A commerical incubator was borrowed from a high school biology department.
>
> The children kept individual notebooks in which they wrote the sequence for the project and their comments for each time an egg was opened. Most pupils

drew pictures each day to show the development of the embryo and its size in relation to the shell. They listed the changes they observed.

Although the class was studying the growth and development of a chick, their discussion stressed comparison of the development of other animal embryos with chickens, including the human animal. Many of the questions that did arise about the embryonic development of the chicken and other animals were answered, often by other members of the class, to the satisfaction of the students and the instructor. One child brought in the April 30, 1965, issue of Life magazine which contained the article, "Drama of Life Before Birth." The picture of the five weeks embryo pictured there was so similar to the ninth day chick embryo that many children commented upon this similarity in the development between the two animals.

Social Science. Early in the project a resource guide, "The American Indian: A Study of Life in a Primitive Culture," was written especially for use in the summer school acceleration classes in Pasadena.[15] The committee envisioned a program in which half the morning would be spent on the unit topic and related subjects and the other half of the morning would be devoted to improvement of individual skills. Seven geographic and cultural Indian groups were included in the outline. At least one basic generalization from each of the eight social science disciplines was selected for emphasis:

1. History. The story of the Indian is the story of America's historical beginnings and represents an important chapter in American history.

2. Geography. The Indians lived at specific locations; many of our states, rivers, mountains, and lakes have Indian names.

3. Anthropology. The cultures which the different groups of Indians developed was tied to their climate and location.

4. Economics. The Indians developed their own economy, which included bartering what they had for materials they did not possess and using wampum for money; and hunting, fishing, and farming to supply their goods.

5. Political Science. The Indians had their own government; each cultural area had ways of keeping law and order.

6. Psychology. The Indians had the same capacity for learning, the same mental characteristics, and the same kinds of emotions as did their white brothers.

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[15] Lois M. Trainor and Others, "The American Indian: A Study of Life in a Primitive Culture." A Resource Guide for Third Grade. Pasadena, Calif.: Pasadena City Unified School District, 1964.

7. Philosophy. The Indians had an appreciation for nature and a kinship with the outside world of forests, animals, or birds. Their religion was expressed in legend, dance, and art.

8. Sociology. The Indians banded together for survival and for common goals.

Sally Patton, a teacher in the project for three years, arranged supplemental and related topics as the content in science. Study trips were made to Southwest Museum, where Indian artifacts and dioramas were observed; and to the Cabrillo Beach Tidepools, where specimens were collected. As a resource speaker, an anthropologist talked to the class about the migrations of Indians from Asia to North America; a marine biologist helped the children relate their information about seashore animals.

Language and Art. Directed opportunities for enrichment in language and the arts were incorporated in the units of study or major topics. Whether pupils studied Indian life or the growth of an embryo, all were taught the initial steps in outlining, the techniques of writing reports, and a simple bibliographical format. Most summer groups prepared a notebook as an experience in reporting.

Imaginative writing abilities were encouraged through listening to the teacher read selections from children's literature and through writing itself. Fairy stories, short essays, limericks, poems, and creative definitions were some of the forms of expression that produced satisfying results for pupils and their teachers. Descriptions of themselves, personal reactions, sensory experiences, and fantasies reflected the interests and the language of the verbal seven-year-old.

Art activities included individual projects in collage, water color, paper sculpture, Modoclay, easel painting, papier-mâché, braiding, and stitchery. Mrs. Patton arranged a creativity corner where art books, art media, and a picture file of ideas were available to students who had finished their assignments. The appeal these materials had for intellectually gifted children surprised some observers. Curriculum planners should give students real choices and then observe their interests and their preferred levels of functioning; descriptive studies of groups of gifted children may fail to point out the wide latitude of individual talents, interests, and abilities to be found within the special summer class.

In music, rhythms, and dramatics, the teachers characteristically selected from third-grade content the experiences that would contribute to the spirited climate of the summer program. As highly experienced teachers, they enjoyed the freedom to use their favorite materials and the extensive library resources available; they could anticipate the appeal of some forms of artistic expression over other forms. Mrs. Patton had collected songs and dances from the Zuni and Hopi Indians, which the children learned quickly and performed delightfully.

Pantomime was introduced with unusual success in several classes. According to Mrs. Ahlemann, the children played charades, pantomimed incidents for the class to guess, and dramatized stories or scenes that they knew or had read.

Physical Education. The programs were organized to conform to state programs, which provided breaks for physical activity. The development of game and playground skills was considered important to the self-image of the accelerated child prior to his enrollment in the fourth grade.

Classroom Organization

Organization of the summer class will depend upon the physical facilities available, the professional functions of the staff, the other uses of the plant and playground, the nature of the programs for gifted pupils in the second grade, and the September placement of the children enrolled. Several alternatives, based on these varying conditions, are suggested in the curriculum areas and materials.

California special summer sessions geared for pupils in the third grade varied from an ungraded primary arrangement for underachieving and gifted accelerates to highly selected groups who had already completed third-grade level curricula during the second grade. One program enrolled a high percent of children from culturally deprived areas--bright children who may have needed special instruction even more than those whose regular school program was planned around high achievement. These suggestions on room arrangement, time schedule, and interest centers are planned for young pupils of high intellectual ability. Minor adaptations are needed as groups vary in competence and in background.

Room Arrangements

One teacher, Mrs. Ahlemann, described her classroom arrangements as follows:

> The student desks were arranged in a modified square with two outside rows facing the center of the room and three short center rows facing the front. All students could easily see each other and still view the front blackboard without difficulty. A table was reserved near the windows for instructor use with individual students, for administration of individual tests, and also for display of preserved embryos.
>
> It was the intent of the instructor to encourage as much freedom of movement as was possible and still maintain an atmosphere conducive to work. The children felt free to move about the room, to help each other, and to receive help from the instructor. This activity took place without apparent disturbance to other members of the class.

Centers of Interest

Particularly useful in classrooms for gifted children were centers to which they could gravitate. In these centers, pupils could display their private collections, browse in exciting books, manipulate sense-stretching equipment, and discuss a mutual interest. Many times the summer session provides the highly intellectual child with his first experience in discussing an important topic at his level of knowledge with a peer. Most of these pupils learn remarkably well from programmed or audio-visual materials when given access to interest centers such as those arranged by Beverly Evans:

> Library Corner. The "reading round" contained a variety of enrichment readers, Britannica Jr. and Golden Book Encyclopedias, a children's atlas, some children's magazines, a world globe, and maps of the United States and the world. In the front of the book shelves was a round table where children could read and work quietly. Adjacent to the shelves and on the wall was the "Book Worm Chart," which depicted a book worm and listed the children's names in alphabetical order. After completing a book, each child would write its title on a small piece of construction paper, formed like a miniature book, and paste it next to his name. The color of the paper indicated the type of book read and provided a library record. Next to the library a bulletin board showed a rocket soaring toward a planet covered with book jackets. The caption was "Let's Explore the World of Books."
>
> Math Niche. Another corner of the room consisted of a table with a film viewer, filmstrips of basic steps in mathematics, flash cards, an abacus, a counting meter, a manipulative clock, a flannel board with cutouts, a peg board, arithmetic games, arithmetic records, and books. A box entitled "Surprise Package" contained SRA Third Grade Arithmetic work sheets. The children were free to attempt any of the sheets in the package, but they were required to make corrections by obtaining the teacher's manual.
>
> Listening Corner. The listening table was used primarily for exposing the children to light classical music and for developing a sense of appreciation toward the stories behind the music. Twice a week the teacher presented a new sound filmstrip pertaining to fairy tales in music, stories in ballet and opera, or legends in music. This filmstrip, along with the record, was placed at the listening post, and the children would operate the equipment when they desired. This post included a record player, eight earphones, a film viewer, and sets of records and corresponding filmstrips.
>
> Science Corner. The Science Corner was another very popular area. This consisted of a table with a wide variety of science displays and manipulative objects, including a film viewer, numerous filmstrips on the natural and physical sciences, three microscopes, four boxes of slides, a chemistry set, many hobby displays, numerous science books, and a bioscope.
>
> Art and Project Corner. Fortunately this center included a large sink area and all the necessary materials such as paint, paste, clay, scissors, and paper. A large working table was available for individual or small group projects. On Monday of every week, a new pair of helpers was chosen to

be in charge of each interest center. The children responsible would keep the corner or table in order.[16]

Time Schedule

The typical daily program was flexible to allow for study trips, special activities, or unanticipated teaching opportunities. The visitations of parents and other observers caused some adjustments, also.

8:00 - 8:15	Opening exercises: roll call, flag salute, singing
8:15 - 9:00	Language arts--reading
9:00 - 9:10	Recess: restroom and drinks only
9:10 - 9:30	Continuation of reading activities
9:30 - 10:00	Creative writing or choric reading
10:00 - 10:20	Break: free play or directed physical education
10:20 - 11:00	Mathematics
11:00 - 11:15	Snack time and sharing
11:15 - 12:00	Social sciences--science
12:00 - 12:25	Literature or art
12:25 - 12:30	Evaluation and dismissal

Evaluation in the Classroom

The brevity of the summer session and the specialized purposes of the program require that the teacher's evaluation procedure be specifically structured. Three steps are essential:

1. Appraisal of the suitability of the curriculum and the organization of the group generally
2. Reports of the progress of individual pupils
3. Review of accomplishments in terms of the goals outlined initially

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[16] "Report of a Pilot Summer Session Workshop-Demonstration, 1964." A California Project Talent report to the California State Department of Education, April, 1965 (mimeographed).

Appraisal of Curriculum and Organization

When a teacher accepts an assignment to teach the gifted for the first time, the level of instruction and the quality of content will need to be anticipated as accurately as possible. Adjustments will need to be made after the teacher observes class reaction to his efforts. A teacher's critique, general in nature, offers insight in planning new programs. Mrs. Evans summarized her evaluation of her first gifted class in the Sacramento workshop as follows:

> Planning for these children was somewhat different from planning for a regular class. Less time was devoted to regular class periods, and more time was given to specified and independent activities. In a regular class, most small groups would be organized primarily for matching abilities, but, with the exception of mathematics groups, our main purpose for small groups was to bring children with similar interests together for an exchange of facts and ideas. Although much of the basic third grade material in SRA mathematics was new, most children were able to move through new concepts rapidly.
>
> In general, the children all had a happy and energetic attitude toward schoolwork. Their reactions to new concepts were favorable, and they adapted readily to new situations. As a whole, their approach to assignments was one of enthusiasm and curiosity. Because of their eagerness to do as much as possible, there were times when their finished products could have been more refined. Many of these children had hobbies and collections which were incorporated into the curriculum. When children were free to choose an activity, they usually did research for social science or science, wrote reports, worked on dioramas or projects, finished daily assignments, toiled on spelling, read, or pursued special interests.

Having thought through the general impact of a program on pupils, the teacher is ready to consider individual accomplishments.

Report of Pupil Success

An evaluation of each pupil's work must be conveyed to the pupil, to his parents, and to the school staff. Strong motivation and superior aptitude for schoolwork enables summer pupils to learn self-evaluation procedures. The graph of reading rate scores, the checklist of library skills, and the record of spelling words to be mastered are examples of good student-evaluation techniques. Such devices help the teacher complete his records and enable the student to develop independence as a scholar. In each of the centers, forms were designed for pupils' use in self-evaluation of their standing in specific subjects and skills. (Examples of the evaluation forms developed in the Ravenswood Demonstration Center are included in the Appendix.)

Parents tend to remain closer to the school situation in special programs than in regular placement. They are more likely to observe the young child at school than the older student. A spring meeting with parents should have communicated the purposes of the program. Class bulletins and the pupil's papers should have conveyed some information about the child's work. But the crucial questions for most parents are: "Is Bob learning the skills he will need in the fourth grade? How does the teacher think he is doing?"

One arrangement that was both effective and conserving of teacher time was the midsummer coffee invitation. A period for classroom observation and informal conversation with the teacher enabled parents to ask questions, to gain assurance regarding the child's future, and to learn the form the written evaluation or progress report would take. Following this meeting, only a few private conferences were needed.

The written report to the home usually became part of the school's cumulative record for the student. When lacking experience with this kind of class, the teacher needs to guard against devaluation of the low child among accelerates--one who appeared strong in a regular class and again will appear average or strong in a typical group in the fourth grade. Over-appraisal is possible also, but children in special classes were more often marked lower than their achievement scores placed them on national or on local norms. In acceleration programs the child's relative strength in a typical third-grade group should be established if possible.

Review of Purposes

The goals for the special summer program were based on the anticipated needs of gifted pupils in the second grade who were selected for planned acceleration to the fourth grade. This six-week program was designed to replace work in the third grade with individualized instruction in skills and with enrichment curricula in science, social science, and other activities suited to the intellectual characteristics of gifted learners. This review of the efforts of the Project Talent staff to achieve the purposes outlined for accelerates constitutes a summary of this chapter as well as an evaluation of how the summer programs generally served their major purposes:

- The transition from the second to the fourth grade was facilitated by the summer session where children learned the study skills and the important concepts usually delegated to the third grade. Pupils, parents, and receiving teachers could participate in the individual placement plan with assurance that each child would have an opportunity to fill the academic gaps which, at times, have handicapped the accelerate.

- The adaptation of basic school curricula to the abilities of mentally gifted pupils resulted in more rapid introduction of new material, lessened amounts of routine work, self-evaluation of progress, pursuit of specialized interests, and the use of resources geared for upper grades. For many pupils, the session was their first opportunity to study with age-grade peers whose interests were similar and whose preferred level of study was comparable to their own. Most of the children were eager participants in the summer program.

- Attention to the development of physical abilities and sociopsychological need was given consistently and daily in the demonstration centers and in the workshops. Some teachers express regret that less than a year was available for physical fitness activities, and one teacher thought the children were short-changed in art by advancement to the fourth grade. The gradual stiffening of physical size criteria for accelerates all but assured that they would be neither the smallest nor the poorest ball players in the classes to which they were advanced. The accumulation of curriculum materials for use in the summer programs, specialized experience on the part of the staff, and the elimination of some content already mastered by the pupils resulted in making more time available for special projects in art, literature, music, mathematics, or science.

- Involvement of pupils in intellectual functions, usually regarded as raising the level of children's thinking, occurred to some extent when groups of very able pupils came together and discussed content--any content. The conscious use of a model for learning and for planning curricula occurred more slowly in younger than in older groups of pupils. Guilford's intellectual operations were used to some extent in each of the acceleration demonstrations or workshops involved in the project--both for planning daily lessons and for evaluating what had taken place. Several teachers who learned to use the learning constructs remarked that their question sequences were better planned and that their groups achieved higher levels of thoughtful discussion than before the learning model was used.

- The extent of satisfaction that the pupils gained from creative production was not determined. All of the teachers planned and reinforced creative activities. To an extent not usually observed in typical classrooms, the teachers encouraged inquiry, hypothesizing, brainstorming, speculation, and other unique and divergent responses. No systematic observations were made of the success teachers had in the development of creative self-direction in pupils; no measures of creativity were available for the age group to use as a check against teacher evaluations. Creativity measures are needed--such as the intelligence and achievement scores used by teachers--to aid in the total evaluation of pupil ability and achievement.

- The initial plan to divide the summer curriculum equally between skills and enrichment was justified by experience at the demonstration center. Subsequent pupil performance on tests and in classroom work indicated that accelerated pupils generally were well prepared academically for fourth-grade work. For every pupil who achieved below average in any one subject, there were 24 whose academic productivity, grades, and test scores were above average in all curriculum areas. (See Chapter 7, "Evaluation of Acceleration Programs.")

PROJECT 6 TALENT
CALIFORNIA

Case Studies of Accelerates

If giftedness is defined as the potential for superior performance in intellectual functions, then hopefully giftedness will manifest itself in high achievement, scholarliness, and creative production. The interaction of superior cognitive abilities, academically oriented, may be expected to lead to self-actualization and personal fulfillment. Thus, the case study procedure should be to gather data that describe the individual's full range of intellectual abilities, assess his productive output, and appraise his total functioning in terms of his potential.

The staff of California Project Talent developed a format for the case study to be used in identifying, counseling, and teaching gifted children.[1] The purpose of this document was to outline detailed procedures for subsequent use in the demonstration centers for gifted children.

Using examples from the Ravenswood Demonstration Center, this chapter emphasizes the three phases of the acceleration program where the need for case study is most apparent: (1) the process of identification; (2) the intellectual development of pupils; and (3) the counseling of gifted children. Three case studies--each of which illustrates one of these procedures and provides insight into the individuality of gifted children--are reviewed. The names of the children, their teachers, and their schools have been changed.

Functions of Case Study

As a tool for use in acceleration programs, these case studies were designed to be developmental rather than diagnostic and descriptive of pupil progress rather than problem centered. In Project Talent, the case study was used to plan guidance for the intellectually talented rather than as a basis for the correction of learning difficulties. In general, case study data were collected to help teachers and counselors do the following:

1. Appreciate individual differences

2. Capitalize on interests and abilities

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[1] "Identification-Case Study," California Project Talent. Sacramento: California State Department of Education, July, 1964.

3. Build upon past successes
4. Provide continuity of experience
5. Identify pressures with which children must cope
6. Provide opportunities for eliminating gaps in learning
7. Identify areas in which creative production might be encouraged
8. Encourage high level and flexible intellectual functioning
9. Help individual children develop appropriate goals

Classroom teachers do not deal with intellect alone, nor can school counselors delimit their function to adjustment problems. Consideration must be devoted to the interaction of physical, cognitive, and affective factors; emphasis on the content of curriculum alone may result in neglect of the attitudinal complexities involved in learning. An understanding of the individual's achievement must form the basis for his daily lessons, which in turn must proceed from the point of the pupil's present knowledge at a pace adapted to his abilities.

The teacher's curricular decisions are complicated further by the interpersonal and intrapersonal differences of 25 or more pupils within the class. Adequate and relevant case histories for each identified gifted learner entering the class assist the teacher to locate more readily appropriate levels for them in each curricular sequence. Thus, the teacher can provide more efficiently for suitable curricula and learning processes stimulating to the interests of these superior learners.

In addition, longitudinal case studies provide much of the relevant data a teacher needs to facilitate many of the emotional adjustments to peers that atypical children encounter.

The availability of case study folders is exceedingly helpful to the teacher of the special summer program. Because the session is short, advance preparation is essential. Advance knowledge of each student--his academic status, learning characteristics, and motivational forces--enables the summer staff to collect appropriate resources, to order individualized material, and to begin the session with productive lessons.

Consultation is vital to the gifted pupil--after as well as during the process of identification. The case history gives counselors and administrators the information they need to help the child matriculate and to adjust to the classroom assignment that is advised--usually a class of typical learners.

Staff experience in Project Talent indicated that a crucial period of adjustment occurred for many children at the time they were accelerated. Gifted children usually confronted growth and adjustment problems ideationally before society or schools provided help for these children to meet such problems.

However, counselors and teachers should be able to detect apprehensions when they occur in elementary school pupils if they look for such symptoms as the following: (1) undue concern with competition; (2) anxiety over body changes; (3) "academic shock" when transferred to a group of high achieving learners; (4) discovery of inconsistencies in adult values; (5) conflicts in choice of life work; or (6) concern over peer relationships. The counselor can deal with adjustment problems of this kind when an adequate continuous record is available.

Selection of Case Study Examples

Three case studies were selected as illustrations of how the case study procedure was implemented in a field situation. The first study illustrates the process of identification. The second case study emphasizes instruction and includes those forms that are used to evaluate the intellectual functioning of the child as he operates in the classroom. The third study shows the need for counseling and guidance of a girl whose problems increase as the gap widens between the educational level of her home and her school.

To increase the usefulness of the case study material, selections were made to include cases from each grade level in the project and from both sexes. No attempt was made to present a prototype of any group, because the purpose for case study was to make clear the individuality of accelerates. Cases were selected only for the value each might have for the implementor of acceleration programs.

The sequence for the selection of cases demonstrates how the major criterion--function--determined the choice of subjects for presentation. The use of case histories in counseling seemed to require a longitudinal picture; therefore, a pupil in the sixth grade was needed. Maria was chosen because she was the only pupil in her acceleration group whose grades were below average when the individual evaluations were made. To present a profile of intellectual functioning, a case was needed which was uncomplicated by social or emotional problems. Carolyn, one of the accelerates in the fifth grade who fulfilled the adjustment criterion, was selected because of her minimal IQ rating at the point of identification. The final example required a boy in the fourth grade whose record illustrated identification for acceleration. Other than Clifton, there were three possibilities: (1) a boy who was limited by his outside opportunities (like Maria); (2) a boy who was quite large (very atypical); and (3) a boy whose IQ on the individual test was minimal (like both previous selections). A rationale based on the usefulness of the cases as examples of the case study in acceleration programs determined the choices of these three cases from 31 cases in the project.

The California Project Talent handbook for case study, which was prepared in 1964, provides forms for collection of data which are comprehensive, cumulative, and continuous. This case history format is designed to provide more information than school districts ordinarily obtain for gifted pupils, but the project staff anticipated the selection of written forms and items for various programs in specific locations. Because of limited availability of the original document, the forms used to prepare case histories in Ravenswood are duplicated in this report. (See Appendix A, "Case Study Format.")

Each of the three sections that follows covers one function of case study and includes three parts: (1) summary of case study data for the total groups; (2) review of the history of one child; and (3) documentation from the case study folders.

Process of Identification

In Chapter 4, it was pointed out that identification criteria were refined with each annual evaluation of the acceleration program. The procedure in the Ravenswood Demonstration Center differed somewhat from that used in other gifted programs and involved a sequence of (1) nomination; (2) screening; (3) examination; and (4) classification. After being nominated by teachers of the second grade, candidates for acceleration were screened by the use of the California Achievement Test, Upper Primary Form W. Those whose scores approximated fourth-grade level in the group test were given an individual test using the Stanford-Binet Intelligence Scale, Form L-M. Each child who showed an IQ of 130 points or over on this test was scheduled for review by the classification committee, which included the building principal, the teacher of the second grade, the district consultant for the gifted, the associate superintendent, and the project consultant. On the basis of all data available, each child was considered for the special summer session and recommended for one of three categories: (1) probable acceleration; (2) enrichment in summer school with possible acceleration; or (3) enrichment program only in summer school.

Summary of Identification Data

Although the criteria for acceleration became more selective each year, the number of children identified and recommended for the summer enrichment program was relatively constant. During the final year of the project, 183 of the 600 pupils in the second grade were nominated for the group testing program, 75 were screened for individual intelligence tests, and 31 were found eligible, according to IQ minimum criteria. Two children, who showed tension symptoms, were not recommended for enrichment. Of the 29 pupils who were recommended for the special summer session at Ravenswood, 24 enrolled and eight were accelerated.

Of the 31 found eligible, the committee recommended 11 children for probable acceleration, ten for possible acceleration, and ten for enrichment only. Three examples from the psychologist's reports--one for each placement category--imply some of the criteria used by the placement committee:

1. Recommended for Probable Acceleration

Clifton

Birthday: 5-1-57
C.A.: 7-8 (on 1-15-65)
M.A.: 11-10 (Stanford-Binet L-M)
I.Q.: 155

Reading Comprehension: 3.9
Arithmetic Reasoning: 4.0
Reading Vocabulary: 4.5

Vocabulary: XIV
Absurdities: IX-XII

Remarriage
Can work for long periods on academic subjects
Youngest of three
Likes to do things well

Clifton was friendly and cooperative throughout the very lengthy testing sessions. He seemed to enjoy them thoroughly. He tests in the "gifted" range of ability, with vocabulary at the XIV level.

Lowest failures in memory for designs and repeating digits reversed, and relative lack of fluency in oral reading and reading comprehension suggest the advisability of some special training. However, he should generally be successful at an accelerated level.

2. Recommended for Enrichment with Possible Acceleration

Robert

Birthday: 10-20-57
C.A.: 7-5 (on 3-11-65)
M.A.: 9-8 (Stanford-Binet L-M)
I.Q.: 130+

Reading Comprehension: 3.8
Arithmetic Reasoning: 4.0
Reading Vocabulary: 3.7

Vocabulary: IX
Absurdities: IX-XII

Parents divorced; mother born in Brazil; poor English
Oldest of three
"Slow in working"

Robert is a large, handsome boy with a slight speech impairment. He sounds as if he has a slight foreign accent and has much tongue movement when he speaks, as if his tongue is too heavy to stay where it belongs. He is left-handed. He seemed poised and alert, cooperating fully. He tests in the superior range of ability and should probably be considered for at least category 2 -- enrichment with possible acceleration.

3. Recommended for Enrichment Only

Lynn

Birthday: 10-31-57
C.A.: 7-2 (on 1-15-65)
M.A.: 9-4 (Stanford-Binet L-M)
I.Q.: 131

Vocabulary: XI
Absurdities: VII

Reading Comprehension: 3.8
Arithmetic Reasoning: 3.7
Reading Vocabulary: 3.9

Only child of only child
Never does her best
Flighty

Lynn is a pale, fairly tense little girl. On both achievement (group) and individual intelligence test situations, she stood out as quick and impatient. She performed at lightning speed and with minimal effort. What she got right away, she got.

She tests in the superior range of ability, and her achievement is good in view of her youth (C.A.: 7-2) and minimal effort. Vocabulary was at XI and absurdities only at VII. Although it is likely that she would do as well, or as poorly, at a higher academic level as at a lower, her lack of involvement should be considered as a questionable factor for advanced placement.

Case Study Review: Clifton

The boy Clifton was typical of pupils whose qualifications for acceleration were clear and unqualified. His selection was determined by the writer for the reasons noted previously. However, any of the children so classified might have served as well to illustrate this step in identification.

A careful perusal of Clifton's record indicates a pupil who, by the second-grade screening period, had developed the essential characteristics for advanced placement: high academic achievement, strong motivation to succeed in school, intellectual curiosity, high energy level, and constructive social behavior patterns. The psychologist's examination revealed a Binet IQ of 155 ± 5. (See Figure 1 for the case study excerpts selected from Clifton's file which are related specifically to screening and nomination.)

Apparently the child's home contributes an attitude of confidence in Clifton's ability to succeed in the program, an atmosphere which reflects the value of education and a schedule for enriching his out-of-school experiences. Clifton's mother reported he is fascinated with dinosaurs, rocks, and minerals; he plays the guitar, camps with his family, swims with friends, and plays tennis with his mother; he likes to make things with clay, paper and paste, and other materials he devises. He spoke in paragraphs at an early age. He remembers musical themes which he hums to himself.

Figure 1

CASE STUDY EXCERPTS FROM CLIFTON'S FILE

BACKGROUND INFORMATION

Confidential Information Date *1-20-65*

Pupil's name *Clifton* Sex: [✓ M] F Birthdate *5-1-57*

Father's name *James* Mother's name *Roberta*

Address *315 Huntington Avenue* Phone *3-27-8*

Summary of School Experience

School	Location	Dates	Grades	Age
Maple	*Spencer Avenue*	*1962 - 1963*	*K*	*5*
Maple	*Spencer Avenue*	*1963 - 1964*	*1*	*6*
Maple	*Spencer Avenue*	*1964 - 1965*	*2*	*7*
Maple	*Spencer Avenue*	*Summer - 1965*	*3*	*8*
Maple	*Spencer Avenue*	*1965 - 1966*	*4*	*8*

Parents

	Father	Mother
Educational Background	*B.A. and law school graduate*	*2-1/2 yrs. college (so far)* *Teacher Education*
Occupation	*Attorney*	*former secretary (medical & exec.)* *homemaker & college student*
Special interests and aptitudes	*politics, education, music, and musical instrument builder*	*sociology, arts, ceramics, music, needlework, textiles, etc.*

Description of Family Unit

Marital status, deaths, other adults in home, and the like	Date
Remarriage - mother, step-father	*?*

Siblings in Home

Name	Age	Sex	Academic potential	Date
Sarah	*14*	*F*	*College potential*	*11-65*
David	*11*	*M*	*College potential*	*11-65*

Record of Contacts with Pupil and Parents

Date	Type of Contact	Initiated by	Purpose and summary
6-1-65	*Phone*	*Dist. Psycl.*	*Clifton's mother was contacted for permission to have Clifton participate in summer enrichment program. She agreed readily and indicated knowledge of the program.*
6-2-65	*Letter*	*Dist. Psycl.*	*Permission forms mailed to Clifton's mother.*
7-29-65	*Conference*	*Teacher*	*Report of summer progress. Recommended fourth grade placement. Mother concurred.*
11-15-65	*Conference*	*Teacher*	*Regular parent conference. Clifton adjusting well to 4th-5th class. Doing superior work in all areas.*
11-19-65	*Letter & Questionnaire*	*Ass't Supt.*	*Request to supply parent inventory.*

Figure 1--Continued

SCREENING AND NOMINATION FORM

Test Data

Academic Achievement Tests

Name	Results	Grade	Date
Calif. Achiev. Tests	*Reading Vocabulary 4.5* *Reading Comprehension 3.8*	*2*	*1-8-65*
	Arithmetic Reasoning 4.0 *Arithmetic Fundamentals 3.7*		

Individual Intelligence Tests

Name	Results	Grade	Date
Binet L-M	*CA 7-8 MA 11-10 IQ 155*	*2*	*1-15-65*

Intellectual Functioning

Disregarding test results, would you rank this pupil in the upper 5 percent of his class in academic performance? In your opinion, is this child "mentally gifted"? Is classroom performance consistent with results of standardized tests?

Upper 5 percent?		"Mentally gifted"? (by state criteria)		Performance consistent with tests?	
Yes	No	Yes	No	Yes	No
X		*X*		*X*	

Check the column which best describes the child's intellectual functioning. These items include a range of possible characteristics or objectives. A child is not expected to be high on all of them.

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
1. Knowledge and skills. (Possesses a comfortable knowledge of basic skills and factual information)						*X*
2. Concentration. (Has ability to concentrate; is not easily distracted)						*X*
3. Enjoyment of school. (Enjoys academic pursuits and assignments; likes school)						*X*
4. Persistence. (Has the ability and desire to follow through on work; concerned with completion; able to see a problem through)	In own interests					*X*
	In assigned tasks					*X*
5. Responsiveness. (Is easily motivated; responsive to adult suggestions and questions)						*X*
6. Intellectual curiosity. (Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own in connection with personal interests or group concerns)					*X*	
7. Challenge. (Enjoys the challenge of difficult problems, assignments, issues, and materials)						*X*
8. Perceptiveness. (Is alert, perceptive, and observant beyond his years; aware of many stimuli)						*X*
9. Verbal facility. (Shows marked facility with language; uses many words easily and accurately)						*X*
10. Fluency of ideas. (Produces a large number of ideas or products, often very quickly)						*X*

Figure 1--Continued

Item to be evaluated	Little	Moderate			Much
	1	2	3	4	5
11. Flexibility. (Is able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems)					X
12. Sensitivity to problems. (Perceives and is aware of problems that others may not see; is ready to question or change existing situations and suggest improvements)					X
13. Originality. (Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality)					X
14. Imagination. (Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights)				X	
15. Reasoning. (Is logical, often generalizes or applies understanding in new situations, expands concepts into broader relationships, or sees parts in relation to the whole)					X
16. Scientific method. (Can define problems, formulate hypotheses, test ideas, and arrive at valid conclusions)					X
17. Independence in thought. (Inclined to follow his own organization and ideas rather than the structuring of others)				X	
18. Independence in action. (Able to plan and organize activities, direct action, and evaluate results)					X
19. Independence in work habits. (Requires a minimum of adult direction and attention; possesses research skills to facilitate independent work)					X
20. Elaboration. (Concerned with detail and complexity; often involved with a variety of implications and consequences)				X	
21. Aesthetic appreciation. (Enjoys and is responsive to beauty in the arts or nature)					X

22. Describe any unpredictable behavior which interferes with study; e.g., wandering away from seat without apparent purpose:

None

23. Describe any unusual preoccupations such as "daydreaming" or "flights into fantasy" which lessen the pupil's learning efficiency:

None

24. Describe any learning characteristics which seem outstanding or would especially facilitate this child's progress in a challenging educational program:

He shows a thorough and consuming delight in all that he does. He truly enjoys learning. He also enjoys people and his whole world.

25. Describe any learning difficulties the child might have in particular areas--difficulties which could hinder progress in such a program:

I am aware of none.

26. Describe any examples of the child's creative productivity:

Draws and labels prehistoric animals. He often created little gifts or cards with much detail, intricate design or illustrations of science, such as prehistoric animals or astronomy, constellations, etc. He could spend long patient hours at this. He also once made a small United States map puzzle, cutting out each state.

Figure 1--Continued

The following list of subjects and activities is to be checked for (1) the child's apparent interest, judged by your observation of classroom behavior; (2) performance, judged either by grades or quality of his products or actions; and (3) the grade level at which the child seems capable of functioning.

Subject	Interest					Performance					Capability
	Little 1	2	Moderate 3	4	Much 5	Low 1	2	Average 3	4	High 5	Grade level
Art					X					X	
Construction or manipulation					X					X	I do not feel competent to evaluate grade level.
Dramatic expression				X						X	
Foreign language											
Handwriting					X					X	
Oral expression					X					X	
Spelling					X					X	
Reading					X					X	
Written expression					X					X	
Mathematics					X					X	
Music					X					X	
Physical activities				X					X		
Science					X					X	
Social science					X					X	

Physical Development

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
1. Physical expression. (Indicates that physical activities are a comfortable, enjoyable area for self-expression)			X		
2. Physical ability. (Coordination, timing, agility, and ability to participate satisfactorily in organized games)				X	
3. Energy level. (Has available resources of pep and vigor for carrying on most activities)					X
4. Physical appearance. (Appears neat, well-groomed; has appropriate clothes for age and group)					X

5. Check the spaces which best describe the child's physical build and posture as compared with the rest of the class:

Physical build: Small stature___ Medium build _X_ More physically developed than most___

Posture: Good _X_ Average___ Poor___

6. Describe any important aspect of the pupil's health or physical development which might affect participation in a challenging educational program.

I know of none.

Figure 1--Continued

Social Development

Check the column which best describes this child's social development.

Item to be evaluated		Little		Moderate		Much
		1	2	3	4	5
1. Popularity. (Others seem to enjoy and want to be with this child; frequently seen interacting with others in a social, friendly manner)	With same sex					*X*
	With opposite sex					*X*
2. Acceptance of others. (Relates to others with genuine interest and concern; enjoys others; seeks them out; shows warmth)						*X*
3. Status. (Assumes public roles and leadership positions or enjoys considerable status in peer group)						*X*
4. Social maturity. (Able and willing to work with others; can "give and take"; is sensitive to the needs and feelings of others; shows consideration, observes rules of social conduct)						*X*
5. Sense of humor. (Ability to laugh at himself; gets enjoyment and pleasure from lighter moments in school day; laughs easily and comfortably)						*X*
6. Sense of well-being. (Seems self-confident, happy, and comfortable in most situations)						*X*
7. Rapport with teacher. (Two-way communication which seems to bring enjoyment to both child and teacher; relatively open and relaxed)						*X*

8. Describe any characteristic of social behavior which you feel could interfere with this child's educational progress:

None

9. Comment upon the child's apparent capabilities for forming friendships and identifying with groups such as Boy Scouts, YMCA, and the like.

His very closest friends are few, take some time to develop and remain constant. He has an easy, happy way with his peers in the class. Belongs to a church and looks forward to joining scouts.

Emotional Development

Check the column which best describes this child's emotional development. Please note that a high score may not be desirable on all of the items which follow.

Item to be evaluated	Little		Moderate		Much
	1	2	3	4	5
1. Emotional stability. (Is able to cope with normal frustrations of living; adjusts to change with minimum of difficulty)					*X*
2. Emotional control. (Expresses and displays emotions appropriately; emotional outbursts rarely occur)					*X*
3. Openness to experience. (Appears to be receptive to new tasks or experiences; seems able to take reasonable risks; can respond naturally to unusual or unexpected stimuli)					*X*
4. Enthusiasm. (Enters into most activities with eagerness and wholehearted participation; maintains enthusiasm for duration of activity)					*X*
5. Self-acceptance. (Seems to understand and accept self; able to view self in terms of both limitations and abilities)					*X*

Figure 1--Completed

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
6. Independence. (Behavior usually is dictated by his own set of values; is concerned with the freedom to express ideas and feelings)						*X*
7. Conformity. (Behavior is influenced by expectancies and desires of others)	Influence of adults			*X*		
	Influence of peers				*X*	
8. Anxiety over achievement. (Seems anxious about achievement; worried or concerned about schoolwork or the impression any performance makes on others)		*X*				
9. Competitiveness. (Has high standards for performance, usually desiring to do as well or better than peers)	*Has high standards, but I don't think he feels competitive.*					
10. Dominance. (Asserts self with influence in a group situation)		*X**				
11. Aggressiveness. (Acts with apparent intent to hurt others)		*X*				

12. Describe any emotional immaturity or other personality characteristic which could hinder this child's development:

I know of none.

* *He shows high ability to lead as well as to be a group participant. He can always assert his ideas but is not demanding or dominant in a negative way.*

Clifton evaluated his own progress in summer school as "doing well" in all areas except multiplication and division, but he thought he was improving. Although he experienced some apprehensions immediately after his advanced placement in the fourth grade, he adjusted quickly to older peers and to the challenging curriculum.

In October following his acceleration, his teacher reported that Clifton was working with the advanced groups of his class in all content areas. His prognosis for continued success in an acceleration program is excellent. If he conforms to the pattern of large groups of male accelerates, his chances of graduating from college, of doing graduate study, and of entering a profession are greater than if he had not been accelerated.

Intellectual Development

The function of a learning theory model, or construct, was introduced early in the project to teachers of enrichment and special classes. However, in the acceleration programs, the initial concern with primary age children was the need for skill development and manipulative experience which tended to crowd the curriculum. By the second year of the project, the idea of conducting a summer session as a special class was extended to the teachers of acceleration classes. Evidence of the implementation of the Guilford structure of learning, particularly, could be observed in the third grade as well as in higher grades, following the summer sessions.

Case Study as Teacher Education

The full implication of the intellectual differences between the gifted pupil and the average pupil does not come quickly or easily to most receiving teachers. This condition exists primarily because the social, emotional, and physical levels of development of the accelerates tend to obscure their intellectual maturity. One receiving teacher remarked, "They seem like such babies at first, but if one gets the whole class to thinking really, these children surprise you with what they can do." One of the most important dividends of having the teacher prepare the profiles on intellectual functioning, which are part of the case study format, is that the teacher's awareness of the intellectual needs of the pupil is enhanced.

Summary of Profiles on Intellectual Functioning

In the spring of 1966, the teachers of all accelerates were asked to rate each pupil on intellectual functioning as well as on other developmental characteristics. They were instructed to use a modified forced sort rating of the accelerate's comparative standing in his present class. If he were one of the 10 percent (three pupils) who ranked lowest in a given characteristic, he was checked in the "1" column; likewise as one of the highest 10 percent (three pupils), he was checked in the "5" column. The middle half of the class, as estimated by the teachers, was checked in the "3" column. The explanation of each characteristic was reviewed during an inservice meeting. (See Appendix A, "Case Study Format.")

According to the teachers, these accelerates clustered at the high end of the scale in most of the items on intellectual behavior. These data are evidence of a generally favorable image the teacher holds of the accelerate among his older classmates. Noteworthy exceptions to the high ratings were the items devised to survey creative or divergent behavior--fluency, flexibility, sensitivity to problems, originality, imagination--where the greatest frequencies occurred in the "3" column. Also disturbing were similar results for items reflecting independence and scientific thinking. Unfortunately, the evaluation procedures did not include a comprehensive comparison of accelerates and controls on intellectual functioning. (See Table 3.)

Two items from an earlier version of the case study format were used: wandering and daydreaming. On both items the teachers wrote "never" for approximately one third of the accelerates; they checked "little" for an additional one half of the sample, and none was ranked in the "much" column. The composite of these profiles is scholarliness, persistence, and conformity to a greater extent than older, less intelligent peers. As a group they appear not to be distinguishing themselves with teachers for creative or independent thinking.

Case Study Review: Carolyn

This girl fits the description formulated by one of the special consultants as the type of pupil most likely to succeed in acceleration: a "tall, passive, and nonthreatening" child. Her case history indicates characteristics of social awareness, personal responsiveness, and appreciation for warm friendships. However, inconsistencies were evidenced when she said she valued being a good pupil more than being popular, being remembered an an understanding person more than being remembered as a good pupil, and studying mathematical problems more than studying about people. She showed a firm core of resistance toward having adults make decisions for her, but she expressed rather consistent determination to do well in areas where she rated herself relatively low. Although her parents seemed to see her as lacking any particular talents, they provided a superior intellectual and cultural environment.

Soon after Carolyn entered the fifth grade, her teacher appraised her intrapersonal abilities as moderate to strong, with somewhat greater strength in cognitive abilities, convergent thinking, and knowledge categories than in divergent production. Although the mother tended to rank the child lower than did her teachers, the evaluations were quite consistent on both academic and intellectual items. The teacher saw the child as high in evaluation abilities when criteria were provided but much less confident of judgments of suitability, correctness, or adequacy.

The teacher was quick to grasp the significance of Carolyn's apparent discrepancy between convergent and divergent productivity. With some new guide-

Table 3

TEACHER RATINGS OF THE INTELLECTUAL FUNCTIONING OF 31 PUPILS FOUND ELIGIBLE FOR ACCELERATION

Item being rated	Number of pupils receiving rating				
	Little		Moderate		Much
	1	2	3	4	5
Knowledge and skills			9	10	12
Concentration			13	5	13
Enjoyment of school		1	2	8	20
Persistence					
In own interests			9	11	11
In assigned tasks		2	10	7	12
Responsiveness			6	12	13
Intellectual curiosity		1	9	14	7
Challenge		2	12	7	10
Perceptiveness		3	9	6	13
Verbal facility		2	10	8	11
Fluency of ideas		1	14	11	5
Flexibility		2	12	10	7
Sensitivity to problems			14	13	4
Originality		2	17	8	4
Imagination			14	11	6
Reasoning		1	10	13	7
Scientific method		2	12	11	6
Independence in thought		2	15	11	3
Independence in action		3	11	12	5
Independence in work habits		3	6	11	11
Elaboration	1	4	12	8	6
Aesthetic appreciation	1	2	6	12	10

lines derived from an extension class on creative writing for children, the teacher made a direct effort to help Carolyn write, draw, and speak with greater freedom and confidence. Her file has accumulating evidence of her willingness to be unique at painting and of her ability to write poetry, including haiku. Her increased independence and participation in classroom discussions were reinforced by the teacher. The group intelligence test, administered at the fifth-grade level, was substantially higher (total IQ 158) than the individual WISC (full-scale IQ 130),administered in the second grade.

Carolyn emerges as a pupil whose early intellectual giftedness has been maintained and possibly strengthened. Judged as a low pupil by the teacher who received her when accelerated to the fourth grade, she so impressed the same teacher with her ability and her determination to succeed that he judged her competent to "skip" another grade by the end of that year. As evidenced by her own ratings and the present teacher's ratings, Carolyn is responding in a conscious way to her teacher's efforts to develop strength in divergent thinking abilities and confidence in such creative activities as design and poetry. Her present acceleration of one year appears fully appropriate at this time. In the judgment of the teacher and the consultant, a second advanced placement might occur if further tests are consistent with recent group ability tests. Achievement tests that have a higher ceiling would need to be given before confidence in recent grade placement scores is justified.

Careful reading of this case study showed that a minimal IQ measured on the individual test was adequate for success in acceleration when other important factors were favorable. Special counseling as an aid to adjustment was not needed at any point in the program. However, the need for qualitative adaptations of the typical course of study is implicit in the study of the child's intellectual growth.

Counseling the Gifted Child

Certain crucial periods when counseling should be available for the gifted program--the time of identification, the special summer session, and the weeks following acceleration to the fourth grade--were discussed in Chapter 4.

In Ravenswood, counseling activities were conducted not only to help pupils make the transitions in the acceleration program and to increase motivation for achievement in schools but also to reduce personal problems. The very intelligent child is not immune to most of the causes of social or emotional problems that affect school children, with the possible exception of severe underachievement. This is rare in identified gifted pupils, particularly at the elementary level, because most screening procedures exclude the very bright with learning problems from special programs for the gifted.

Problems of Individual Placement for the Culturally Handicapped

No attempt will be made to make generalizations regarding the problems minority group children encounter in acceleration programs. When one considers them as a separate group, the sample size becomes very limited and the variables too numerous to control. In the writer's opinion, however, the current and overdue interest in the development of leadership within minority groups should focus on the young and the bright--unless self-image is less important than it seemed to appear in the case studies. This report cannot suggest any one answer to the placement of culturally disadvantaged children, but professional people should be alerted to the special need for image building which some gifted minority children revealed.

The case study of each accelerate in the Ravenswood program disclosed that pupils whose advanced placement was followed by serious problems in school achievement were in all cases minority group children. In each instance the home approved the program and usually appeared to value success in school. However, the limitations of what the home offered in communication with the child--books and materials, educational excursions, and reinforcement of school learning--became apparent as the child advanced in the grades. Some children seemed to need the reinforcement of being at or near the top of the class. In several minority group children, this kind of motivation seemed to make the difference between trying and giving up. The individual placement procedure that evolved in Ravenswood should facilitate appraisal decisions of future committees on gifted programs and lead to the provision of enrichment rather than acceleration for any child whose lack of acceptance among peers is a significant factor at the time.

Summary of Counseling Activities

The children in Maria's group of accelerates were the initial, or first, group in the talent development project. They were observed during the summer session by the special teacher and by the project consultant. The district psychologist conferred with their parents, who also met as a group with the teacher and the project consultant. Soon after acceleration each student was observed in class and interviewed by the district coordinator or the project consultant. Several children were counseled by the project consultant, who also contacted parents or teachers if she thought such contacts advisable. The reports from such contacts were drawn from Maria's file and are included in the case study examples.

When this first class entered the fifth grade, two accelerates--not including Maria--were referred to the guidance staff for counseling. Both were girls whose extreme competition for the friendship of a third girl accelerate caused personal difficulties for the trio and disruption for the class. After four or five sessions with the school counselor, the problem was alleviated and the sessions were discontinued. During the second semester, the special consultant for the project interviewed all accelerates for purposes of individual evaluation.

At the time of this report, the teachers of accelerates were surveyed on the current need for student counseling. Four girls in the sixth grade were referred--one for underachievement and three for personal problems. Children counseled previously were not referred; apparently the teachers saw no problems in academic or personal adjustment beyond those they felt adequate to handle by themselves.

Case Study Review: Maria

Although Maria had outstanding success in kindergarten and the first and second grades, her achievement declined after acceleration to the point that her life in the fifth grade was characterized by untidy work, poor grades, and friendlessness. Maria was interviewed by a special consultant for evaluation of the demonstration project in the spring of 1965. At that time she was the only child at the center who was receiving school marks below C. During the sixth grade, however, the teacher reported increased motivation, C to A averages inclusive of some weak spots, and several stable friendships in the class. Why did Maria encounter these difficulties, and how was her improvement accomplished?

The results of group readiness and mental maturity tests, administered at kindergarten and second-grade levels, indicated strong academic potential and put Maria within the gifted group, according to state criteria effective at that time. As a primary pupil, Maria apparently considered herself on or above par when compared with other children, except in self-control, dress, organization, and independence. She indicated that she placed great value on getting her homework finished, being kind, and knowing the right answer at school. The teacher of the second grade saw her as outstanding in cognitive, affective, and physiological characteristics. Her mother saw her as good in singing and dancing, but she said Maria needed to "...learn to be a good loser as well as a winner." The psychologist saw her as superior in intelligence and academically competitive. Maria's self-portrait showed a contented little girl with long pipe-curls.

According to their reports, Maria's teachers in the fourth and fifth grades saw her as barely getting by, lazy, and unable to do anything without help and encouragement. Her parents saw her as improving but needing help with spelling and reading. The project consultant, a psychologist, saw her as Indian-like in appearance and having an unusually nice voice. The consultant found Maria unresponsive, and the interview was difficult and incomplete. The child who at age seven had written, "I wish I had more than five weeks in third grade," now responded that she liked nothing about school except that it was "something to do." Retention was considered at this time.

At the sixth-grade level, the principal's decision to continue to assign her to an accelerated grade but to place her in a class of average pupils may have contributed to the enhancement of her self-image and to the improvement of her status with peers. The sixth-grade teacher's direct counsel, his subtle ways of building her confidence as a learner, and his use of an evaluation system that she understood and could predict seems to have been effective. Maria was given specific ways to do better in school, together with the hope that she could meet expectations. The teacher's goal for her--that she become a strong pupil during the present academic year--was reasonable and attainable. His efforts to help Maria develop self-direction in study skills appeared fruitful. She showed high motivation and performance whenever new skills and new content--such as foreign language, programmed spelling, and unfamiliar mathematical concepts--were introduced.

Near the end of the sixth grade, Maria's prognosis seemed better than at any time since acceleration. Her teacher's ratings were in the average to high range, and he considered her nearly prepared to do strong grade-level work in the junior high school. In conference sessions, the project evaluator saw her as responsive and happy. She had several good friends in school at that time. In describing her ideal classroom, she "wouldn't want it any different."

To summarize, Maria's tolerance for disappointment appeared to be relatively low. Stimulation from success, or positive reinforcement, appeared to be essential for her. She needed a counselor's help to understand and cope with the value discrepancies between her home and her school. (Case study forms particularly relevant to the need for counseling gifted children, such as Maria, may be found in the appendix.)

Comments and Recommendations

The initial selection of cases to be presented in this chapter was determined by the particular function that had been emphasized in the individual history, together with certain additional criteria indicated at the beginning of this chapter. A case study procedure which contained the necessary data for counseling was illustrated.

No conclusions are drawn from the three cases presented; generalizations arising from this report are reserved for Chapter 8. However, an extensive and extended study of even a small group of individuals tends to leave the observer with impressions, some of which may have value in a comparable field situation. Several points, prompted by the three case studies presented, are appropriate:

1. Each accelerate must be viewed as an individual person; none of the prototype of gifted pupils nor any of the descriptive research studies describes any of these children adequately for purposes of counseling or instruction. Each child interacted with the school environment in unique ways; the critical classroom factors were unlike for these three pupils. Each showed strong drives at times; each tried, often strived, to make or find his place in the school environment. Each had his own pattern of needs which persisted for the duration of the observations, although these needs were obscured at times under a facade of carelessness or shyness.

2. Each of these accelerates was a superior learner, but intrapersonal differences, or learner idiosyncrasies, created a challenge for each teacher. Clifton functioned beyond most of his classmates soon after advanced placement; Carolyn needed to be taught to function in creative and divergent areas more effectively; Maria was not really at home in the kind of superior learning environment that would enable her to attain her full potential.

3. Each of the accelerates experienced a period of adjustment immediately following acceleration when doubts about advanced placement were

recognized either by the pupil himself, by his teacher, or by both. For one pupil, Maria, the adjustment period was long and probably damaging.

4. The case studies revealed certain interesting behavior patterns held in common by the three children. All enjoyed older friends whether at home or at school. Each related well to adults--Clifton did puzzles and games with his mother, Carolyn formed neighborhood clubs with friends who were older than she, and Maria missed her two grown sisters. Although each was unique in his aspirations and motivations, all showed sensitivity to adult goals, all responded quickly to adult influence, and all communicated well with counselors and teachers.

   The case studies culminated in some tentative recommendations for subsequent operation of acceleration programs in the schools.

5. The tightening of criteria for advanced placement to the fourth grade appeared justified--particularly the increased emphasis on appraisal of such personality factors as work-study habits, level of aspiration, response to challenge, energy level, health and attendance record, intelligence profile, and cultural values.

6. Provision for systematic case study of all accelerates or potential accelerates should be initiated. Because of the impact on the life of the gifted child of any decision to advance or not to advance him, individual consideration based on pertinent information is essential. Recorded and systematic observations which cover the school years are helpful in teaching the atypical child and in counseling him at crucial periods of uncertainty or adjustment.

7. A team approach is needed for the case study so that the principal, the teacher, and the counselor are consistent in the direction and purpose of their guidance, although not necessarily in their technique. Gifted children are perceptive of adult motivations, and the child who is personally insecure may find the inconsistencies in adult values disturbing. The academic or cultural gap which exists between some homes and the school cannot be fully bridged, but a complete case history helps to extend communication between the home and the school. The mechanics of sharing a pupil's case study folder need to be arranged so that historical as well as current forms are available to all professional adults who interact with the child.

8. Counseling for all gifted accelerates and for some parents seems to be indicated in the case studies. Parents need to understand the basis for selection of the pupils for the special summer program. Pupils and parents need to be informed and to concur in the child's final classification, whether enrichment or acceleration. Even mature, highly gifted pupils may need counseling opportunities at times, especially during the early weeks of advanced placement. The improved instruction of the children, the conservation of professional time, and the alleviation of parental anxieties are three of the advantages which accrue from case study.

Evaluation of Acceleration Programs

Evaluation is employed in an acceleration program for three major purposes: (1) to determine which pupils qualify for placement; (2) to determine each pupil's placement; and (3) to determine each pupil's progress in the program. A variety of different instruments that have been standardized are available for use in collecting data needed in making the evaluation, and an equally great variety of instruments can be devised to collect certain data. New types of instruments and new techniques are needed to evaluate the improvement in a pupil's attitudes and behavior as a result of his participation in the program. To determine the ultimate and full value of the program, we need to take into consideration the values of the program that appear later on in the participant's life. At present, standardized tests and instruments devised by the people involved in the project are being used in various combinations -- and with a variety of research techniques -- in order to secure the data required to complete the evaluations.

The instruments used and the techniques employed in making the evaluations will be determined, at least to some extent, by the resources of the school district conducting the acceleration program. These resources include funds for purchasing standardized instruments and developing other instruments; research personnel to conduct the program, administer the standardized tests, and interpret the test results; data processing equipment or staff for processing data manually; and curriculum specialists to interpret research data in relation to program operation.

Evaluation results serve many purposes; however, the major purpose is that they provide a sound basis for decisions that result in the pupil's having the opportunity he needs to progress educationally at the rate and to the extent that his ability permits. The results also provide a basis for the following: (1) changes in curriculum content or instructional procedures that are needed; (2) selecting instructional materials for use in the program; (3) determining the extent to which pupils are profiting from participation in the acceleration program -- or perhaps the extent to which they are being harmed; (4) developing justification of the program as required by the governing board of the school district; (5) developing justification for expansion of the program; and (6) identifying personnel requirements for operating the program. The value of evaluation is great, and the profitable uses that can be made of the results are diverse. Therefore, great care should be taken to develop and maintain an evaluation program that is appropriate and adequate for all known desirable purposes.

Evaluation of California Project Talent Acceleration Program

In the California Project Talent acceleration program conducted in each of the two demonstration centers, one in the Pasadena City Unified School District and one in the Ravenswood City Elementary School District, evaluation was planned and employed as an integral part of the program. The plan of evaluation was patterned on that which Klausmeier employed in making his studies in Racine, Wisconsin.[1] However, since the two California school districts differed, some variation in the provisions for evaluation existed. Brief, but complete, reports of the uses made of the evaluation of each program and of the data collected make apparent both the similarities and the differences. And the reports make apparent the values offered gifted pupils by opportunities that permit them to complete their basic educational program at rates accelerated beyond those of pupils in the traditional program.

Pasadena's Acceleration Program

The Pasadena Acceleration Program, initiated in the 1961-62 school year, was conducted by the Pasadena City Unified School District. This district was designated as a California Project Talent Demonstration Center.

A group of 67 pupils in the first grade was selected for participation in the Pasadena acceleration program; however, only 52 of the pupils continued in the program and entered the fourth grade in the fall of 1963. Of the other 15 pupils, 12 were removed from the program by a committee, and three moved out of the district with their parents.

The acceleration program was planned as follows:

- Pupils in the first grade were observed by their teachers, and those who evidenced giftedness were nominated by their teachers and principals as candidates for the acceleration program.
- Pupils nominated as candidates were administered the Stanford-Binet Tests of Intelligence, and a thorough case study was made of each pupil who scored 130 or higher. The pupils thus selected were assigned to cluster groups when they entered the second grade.
- Pupils in the cluster groups in the second grade were observed by their teachers, a pupil personnel worker, and principals to determine which pupils evidenced the ability required for success in the acceleration program.
- Parents of pupils recommended by a committee of three (teacher, pupil personnel worker, and principal) for participation in the program were invited to a meeting in which the acceleration program was explained.

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[1] Herbert J. Klausmeier and Richard E. Ripple, "Effects of Accelerating Bright Older Pupils from Second to Fourth Grade," Journal of Educational Psychology, LII (April, 1962), 93-100.

- The program for the first half of the second grade consisted of acceleration of the regular program of instruction for the grade, plus enrichment. The program for the second half of the second grade emphasized systematic instruction in third grade material in reading, mathematics, and spelling. In conjunction with this instruction, cursive handwriting was taught as time permitted, and creative writing was encouraged for the express purpose of increasing the pupils' facility with written expression.
- As the pupils participated in the acceleration program for the second grade, they were observed by their teachers. Whenever a pupil evidenced signs of being overburdened or experienced excessive difficulty, his parents were called in for a conference with the teacher, pupil personnel worker, and principal to determine the advisability of the pupil's continuing in the program. A pupil was removed from the program when this committee decided that it was advisable to do so.
- Pupils who participated successfully in the acceleration program for the second grade were enrolled in summer classes in which instruction was given for six weeks. This instruction was divided almost equally between enrichment of the social sciences and sciences and the development of skills.
- Pupils who participated successfully in the summer classes were assigned to the fourth grade.

This description of the procedure which was followed with the first group of gifted pupils enrolled in the acceleration program offered by the Pasadena public schools shows how the program functions. Each year since the program was initiated in 1961-62, a new group has entered the program. The program evaluation described here, however, deals only with the group that entered the program in 1961-62.

Evaluation Procedures

Brief descriptions of the evaluations employed and an outline schedule for making the evaluations follow:

- Standardized achievement tests in reading and arithmetic were administered to all the pupils in the fourth grade in October. The test scores of pupils in the acceleration program were analyzed in relation to the mean and quartile scores for the district.
- In March each teacher of a fourth grade received a questionnaire in which he judged each accelerant's adjustment and progress. The questionnaire was designed so that the judgments were reported on a five-point scale. That same month, the parents received a similar questionnaire in which they judged the progress and adjustment of their child in the fourth-grade program. The questionnaire completed by the parents contained open-ended questions that provided opportunity for the parents to express opinions regarding the acceleration program.

- Standardized achievement tests in reading, language, and arithmetic were administered in February to all accelerants in the fifth grade, and the ratings of the individuals and of the group were compared with local and national norms.

Evaluation Results

The results of the evaluations made at the different intervals in the acceleration program make apparent the values derived by the accelerants from participation in the program. It should be noted, however, that the results of the evaluations do not present a complete picture; nor could they, for certain of the values will likely remain unknown until some future period in the lives of the accelerants.

October, 1963, Test Results. The Iowa Tests of Basic Skills were administered in October, 1963, to all pupils in grade four of the Pasadena public schools. The scores made by the pupils in the acceleration program on the reading test ranged from 4.4 to 8.8 in grade placement, with a mean placement of 5.9. The scores on the arithmetic test ranged from 3.5 to 8.7 in grade placement, with a mean placement of 5.1.

The scores made by the pupils in the acceleration program indicated that they were performing as a group well above the norm for their grade that had been established in standardizing the test. However, this standardized norm was exceeded by the fourth-grade population of the Pasadena public schools. Therefore, before it was concluded that the pupils in the acceleration program were sufficiently advanced to perform comfortably at the level of the classes to which they were assigned, the pupils in the acceleration program were ranked by quartiles, and the results were studied in relation to the quartile ranking of all the fourth-grade pupils in the Pasadena public schools. The results of this study are shown in Table 4.

Analysis of the quartile distribution of the pupils in the acceleration program revealed that their scores in reading placed 25 (50 percent) of the pupils in the upper quartile, 14 (28 percent) in the third quartile, and 11 (22 percent) in the second quartile on a districtwide basis. The pupils' scores in arithmetic placed 23 (46.9 percent) of the pupils in the upper quartile, 16 (32.7 percent) in the third quartile, 6 (12.2 percent) in the second quartile, and 4 (8.2 percent) in the lower quartile.

March, 1964, Questionnaire Survey Results. During March, 1964, a questionnaire survey was conducted to find the opinion of each pupil's fourth grade teacher regarding the pupil's progress in the acceleration program. The questionnaire used for this purpose was designed for the teacher to record his responses on a five-point scale. A survey to find the opinion of each pupil's parents regarding their child's progress in the acceleration program was also conducted at the same time. The questionnaire used with parents, like the one used with teachers, was designed for responses to be recorded on a five-point scale. But the questionnaire also contained some questions that were designed to encourage parents to express themselves freely regarding the program.

Table 4

QUARTILE DISTRIBUTION OF ACCELERATED PUPILS IN GRADE FOUR BASED ON DISTRICTWIDE DISTRIBUTION OF SCORES ON THE IOWA TESTS OF BASIC SKILLS*

Number of pupils	Quartile			
	Upper	3	2	Lower
	Reading			
50†	25	14	11	0
	Arithmetic			
49‡	23	16	6	4

* Test administered in October; see Table 6 for complete results.

† Two pupils were absent.

‡ Three pupils were absent.

The results of the survey that were collected on the five-point-scale phase of each questionnaire are shown in Table 5.

Table 5

PUPILS' PROGRESS IN ACCELERATION PROGRAM AS REPORTED BY FOURTH GRADE TEACHERS AND BY PARENTS

Person making rating	Number given rating*					Total
	E	G	S	F	P	
Teacher	23	20	7	2	-	52
Parents	25	19	3	-	2	49†

* Key: E=Excellent G=Good S=Satisfactory F=Fair P=Poor

† Parents of three pupils did not complete questionnaire.

The teachers rated 43 of the 52 pupils (83 percent) as making excellent or good progress in the acceleration program, 13.4 percent as making satisfactory progress, and 3.6 percent as making poor progress. The parents of 25 of the 49 pupils (51 percent) rated their children as doing excellent in the acceleration program, parents of 19 pupils (38.8 percent) rated their children as making good progress, parents of three pupils (6.1 percent) rated their children as doing satisfactorily, and parents of 2 pupils (4.1 percent) rated their children as doing poorly. (See Table 6 for data collected on the five-point scale.)

Responses to questions included in the questionnaire clearly indicated that most parents were pleased with their children's progress in the acceleration program. Typical responses were "enjoys work immensely," "not tense and relaxes easily," "reacts best when challenged," "no evidence of peer or status problems," and "like she belongs there."

Both the teacher and parents of certain children reported that the children's handwriting was immature or that the children did not have the necessary mastery of the computational skills. Most frequently, any reference to immaturity pertained to boys.

February, 1965, Test Results. The Iowa Tests of Basic Skills were administered in February, 1965, to all fifth grade pupils in the Pasadena public schools. Included in this group were 47 of the 52 pupils who entered the fourth grade as members of the accelerated group in September, 1963; these had taken the Iowa Tests of Basic Skills when they were administered to all fourth grade pupils in October, 1963.

The scores made on the tests administered in February by the 47 pupils were studied in relation to the test publisher's norms for the grade, and it was found that the reading norm for the group was 14 months above the publisher's norm; the language norm, 17 months above; and the arithmetic norm, six months above.

In reading, 29 of the 47 pupils (61.7 percent) scored in the upper quartile for the district, and only four scored below the publisher's norm of 5.1.

In language, 25 of the 47 pupils (53.2 percent) made scores that were in the upper quartile for the district. In arithmetic, 24 of the 47 pupils (51 percent) made scores that were in the upper quartile for the district; however, 10 of the 47 pupils (21.3 percent) scored below the norm. It should be noted, though, that 37 of the pupils (78.7 percent) made scores in arithmetic that were at or above the district mean. (See Table 6 for complete test results.)

All data collected that were based on the Stanford-Binet Tests of Intelligence; the Iowa Tests of Basic Skills administered in October, 1963; the questionnaire five-point scale used in making the survey of the teachers and parents' opinions regarding the pupils' success in the acceleration program; and the Iowa Tests of Basic Skills administered in 1965 are shown in Table 6.

Table 6

EVALUATION OF PROGRESS OF PUPILS IN ACCELERATED PROGRAM

Pupil	Binet IQ	Fourth grade teacher's evaluation	Pupil's parents' evaluation	Score on Iowa Tests of Basic Skills, October, 1963 (Norm 4.1)		Score on Iowa Tests of Basic Skills, February, 1965 (Norm 5.1)				
				Reading	Arithmetic	V	R	V&R	L	A
1	144	Good	Satisfactory	5.7	3.8	5.7	6.6	6.2	6.0	5.8
2	116	Excellent	Excellent	5.8	5.4	6.3	6.6	6.5	7.4	4.6
3	152	Satisfactory	Poor	4.7	4.5	5.5	5.5	5.5	6.2	5.2
4	133	Satisfactory	Satisfactory	5.0	3.9	5.1	4.5	4.8	5.4	5.4
5	155	Excellent	---	6.2	6.0	7.1	6.7	6.9	7.7	6.2
6	145	Good	Good	6.9	5.4	7.6	5.7	6.7	6.9	4.9
7	130	Satisfactory	Good	5.5	4.8	5.1	4.4	4.8	5.0	4.4
8	106	Good	---	6.5	5.0	5.8	5.9	5.9	5.2	5.3
9	114	Good	Good	4.9	4.2	5.6	5.7	5.7	6.3	5.6
10	144	Good	Excellent	4.8	5.8	6.4	7.8	7.1	6.8	5.6
11	125	Satisfactory	Good	5.8	5.5	5.7	6.7	6.2	6.3	5.7
12	157	Excellent	Excellent	6.3	6.4	7.2	6.6	6.9	7.7	7.0
13	143	Excellent	Good	6.8	5.7	---	---	---	---	---
14	131	Excellent	Excellent	7.2	6.0	6.7	6.9	6.8	8.2	6.8

Table 6--Continued

EVALUATION OF PROGRESS OF PUPILS IN ACCELERATED PROGRAM

Pupil	Binet IQ	Fourth grade teacher's evaluation	Pupil's parents' evaluation	Score on Iowa Tests of Basic Skills, October, 1963 (Norm. 4.1)		Score on Iowa Tests of Basic Skills, February, 1965 (Norm 5.1)				
				Reading	Arithmetic	V	R	V&R	L	A
15	141	Excellent	---	6.7	5.4	6.5	7.1	6.8	7.6	7.0
16	170	Good	Excellent	8.0	4.5	8.5	7.2	7.9	8.1	6.6
17	140	Good	Good	5.9	4.8	6.4	6.4	6.4	6.9	5.8
18	139	Excellent	Excellent	---	---	6.5	6.5	6.5	8.4	6.7
19	132	Excellent	Good	5.4	5.0	6.9	6.6	6.8	6.5	4.4
20	140	Excellent	Excellent	7.0	5.4	7.1	6.8	7.0	8.3	5.6
21	136	Excellent	Good	4.9	5.3	5.6	6.2	5.9	6.8	5.8
22	133	Good	---	5.0	5.3	6.1	6.0	6.1	6.6	5.8
23	137	Good	Excellent	4.8	4.5	---	---	---	---	---
24	166	Excellent	Good	7.2	6.3	7.2	8.2	7.7	8.1	6.0
25	154	Excellent	Good	8.5	5.9	7.9	7.6	7.8	8.4	6.1
26	138	Good	Good	5.8	4.5	5.0	5.2	5.1	6.5	4.6
27	143	Excellent	Excellent	6.1	5.5	6.1	6.9	6.5	6.4	6.6
28	168	Excellent	Excellent	7.0	6.1	7.6	7.2	7.4	7.7	5.8

Table 6--Continued

EVALUATION OF PROGRESS OF PUPILS IN ACCELERATED PROGRAM

Pupil	Binet IQ	Fourth grade teacher's evaluation	Pupil's parents' evaluation	Score on Iowa Tests of Basic Skills, October, 1963 (Norm 4.1)		Score on Iowa Tests of Basic Skills, February, 1965 (Norm 5.1)				
				Reading	Arithmetic	V	R	V&R	L	A
29	132	Satisfactory	Excellent	4.6	5.3	4.7	5.0	4.9	5.8	4.6
30	130	Good	Good	6.3	5.6	4.8	4.6	4.7	6.6	4.3
31	134	Satisfactory	Excellent	---	---	6.1	6.1	6.1	6.7	4.6
32	126	Fair	---	5.4	4.7	5.6	6.2	5.9	6.0	5.6
33	138	Good	Excellent	5.9	4.4	5.7	5.1	5.4	6.2	5.2
34	138	Excellent	Excellent	6.6	5.6	6.1	6.6	6.4	7.0	5.3
35	143	Good	Good	5.5	5.2	5.9	6.3	6.1	6.5	5.7
36	144	Fair	Poor	5.2	4.3	6.5	6.4	6.5	4.8	4.2
37	158	Excellent	---	6.4	5.1	6.7	7.6	7.2	6.8	7.0
38	196	Excellent	Good	6.8	5.6	8.9	8.2	8.6	8.5	7.0
39	146	Satisfactory	Excellent	5.0	5.4	6.4	8.5	7.5	7.7	5.2
40	147	Good	Excellent	5.3	5.2	5.6	5.4	5.5	5.3	5.8
41	154	Excellent	Excellent	7.9	4.9	7.1	7.2	7.2	7.9	5.8
42	136	Excellent	Good	6.0	4.4	6.7	7.0	6.9	7.8	6.7
43	146	Good	Excellent	4.5	4.5	6.8	6.8	6.8	7.0	6.1

Table 6--Continued

EVALUATION OF PROGRESS OF PUPILS IN ACCELERATED PROGRAM

Pupil	Binet IQ	Fourth grade teacher's evaluation	Pupil's parents' evaluation	Score on Iowa Tests of Basic Skills, October, 1963 (Norm 4.1)		Score on Iowa Tests of Basic Skills, February, 1965 (Norm 5.1)				
				Reading	Arithmetic	V	R	V&R	L	A
44	140	Excellent	Excellent	5.3	5.6	5.8	5.4	5.6	6.2	5.7
45	149	Excellent	Excellent	7.7	5.7	6.8	7.2	7.0	8.0	6.5
46	135	Good	Excellent	4.4	3.5	8.9	6.6	7.8	5.9	4.5
47	134	Excellent	Excellent	6.3	4.7	6.7	7.0	6.9	7.5	6.6
48	139	Good	Excellent	5.3	4.0	6.9	7.2	7.1	4.1	5.8
49	131	Excellent	Good	5.4	---	---	---	---	---	---
50	132	Good	Good	5.3	5.3	6.2	6.6	6.4	7.0	6.0
Group average						6.4	6.5	6.5	6.8	5.7

Conclusions and Recommendations

The following conclusions and recommendations were formulated by the administrators and consultants who helped to plan, conduct, and evaluate the acceleration program for gifted pupils in Pasadena public schools as a phase of California Project Talent:

- The high achievement and the successful adjustments made by accelerants in the fourth grade confirmed the report of such achievement and adjustments made by other studies.
- Standardized test results should be studied in relation to pupils' progress in the acceleration program to determine the level of academic talent needed for success in the program.
- Characteristcs of pupils, such as motivation, that are not measured by standardized tests but which play important roles in pupils' success in the acceleration program should be identified for use as guides by those responsible for the selection of participants for acceleration programs.
- The function of counseling should be delineated, especially its function during the period of transition from the second to the fourth grade.
- Pupils in the acceleration program maintain their high levels of performance in reading, language, and arithmetic as they progress in the program.

Briefly stated, the California Project Talent acceleration program conducted in the Pasadena public schools proved that gifted children's progress in school can be accelerated to the advantage of the children. However, it should be noted that the ultimate and full value of the program to each participant cannot be known now, for it is most likely that the value to each participant will become increasingly great as he progresses through life. Herein lies the need for follow-up studies of the effect that participation in the acceleration program has upon those who are participants.

Ravenswood's Acceleration Program

The Ravenswood Acceleration Program, initiated in the 1962-63 school year, was conducted in the Ravenswood City Elementary School District, which had been designated as a California Project Talent Demonstration Center. During the interval beginning in the 1962-63 school year and ending with the 1964-65 school year, three groups of pupils entered the acceleration program.

The first of the three groups entered the acceleration program in the 1963-64 school year. During that year, 74 pupils in the second grade were nominated for admission to the program. Of this group, 26 pupils were enrolled in the 1963 summer school program, which was designed to cover those phases of the elementary school program regularly assigned to the third grade. Of these 26 pupils, 24 enrolled in the fourth grade in the fall of 1963; 19 of the 24 pupils subsequently enrolled in the fifth grade in the fall of 1964. Between 1963 and 1964, the parents of the other five pupils had moved out of the Ravenswood City Elementary School District.

The second of the three groups entered the program in the 1963-64 school year. During that year, 40 pupils in the second grade were nominated for admission to the acceleration program. Of this group, 32 pupils were accepted, but only 20 of those accepted were enrolled in the 1964 summer school program, which was designed to cover those phases of the elementary school program regularly assigned to the third grade. Special provisions included program enrichment and emphasis on critical thinking. Of the 20 pupils enrolled in the summer program, 12 enrolled in the fourth grade in the fall of 1964; only seven of these pupils enrolled in the fifth grade in the fall of 1965. The parents of the other five pupils had moved out of the Ravenswood City Elementary School District.

The third of the three groups entered the acceleration program in the 1964-65 school year. During that year, 21 pupils were nominated for admission, but only eight of this group completed the summer program and entered the fourth grade in the fall of 1965.

The evaluations included in this report cover only the pupils in the first two groups -- the group that entered the acceleration program in the 1962-63 school year and the group that entered in the 1963-64 school year.

Evaluation Procedure

The evaluation procedure employed with the 19 pupils who completed the 1963 summer session and entered the fourth grade in September as accelerates is outlined, and the results of the evaluation are presented in the following sections:

1. The 19 fifth grade accelerates (15 girls, 4 boys) were matched for sex and other factors with two control groups: (1) fifth grade pupils of similar mental age (MA); and (2) fourth grade pupils of comparable IQ. The CTMM scores obtained in 1964-65 were used for matching the groups.

2. The three groups were compared on a number of variables: chronological age, CAT scores, ratings by teachers, results from a questionnaire completed by the pupils' parents, and data from interviews with each pupil.

3. The accelerates were compared with high IQ peers who were not accelerated but who had been considered for the acceleration program.

Comparison of Accelerates and Controls. Originally, the plan was to match the fifth grade accelerates with fifth grade (MA) control pupils within classrooms. However, controls were not available in most classrooms or in some schools. A fourth grade control could not be found for one girl accelerate.

Of the 18 sets of subjects (one accelerate plus two controls), only eight were matched for school. No attempt was made to match members of a set by race, but eight of the sets were of the same race. The mental ages of the fifth grade controls exceeded by one month, on the average, those of the accelerates with whom they were paired. The range of differences from -13 to 9 months makes apparent the fact that there was only a fair degree of similarity between the mental ages of the paired fifth grade accelerates and those of the controls. However, it should be noted that the mean mental age of the accelerates was 148.5 months and that of the controls was 149.5 months.

As the study progressed, the evaluators became interested in the reasons for the exclusion of the fourth grade controls from the acceleration program in 1962-63. Of this control group of 11 children, five were in the district in 1962-63 but had not been considered for the program, and six had been considered but had been dropped because of low composite ratings. These were designated as the 4C (NC) group. Comparisons were made of this partial fourth grade control group as well as with the total 4C group.

Matching fourth grade pupils in the control group with the fifth grade accelerates according to IQ was extremely difficult. The 18 pairs matched for CTMM IQ showed mean differences between pairs of 2.2 IQ points in favor of an accelerate. Four pairs with differences greater than ten IQ points matched somewhat better on either verbal or nonverbal parts of the CTMM. When the fourth grade control group was compared with the fifth grade accelerated group on total IQ, verbal IQ, and nonverbal IQ, the differences between groups were not evident.

Calculation of chi square for the difference between the 5A and 4C (NC) medians on CTMM verbal IQ resulted in a chi square of .79 (p between .50 and .30). A similar comparison between the two groups on total CTMM IQ gave a chi square of 2.5. There seemed to be no demonstrable difference between the accelerated and nonaccelerated children in intellectual ability as measured, whereas in 1962-63 the composite rankings of the 4C (NC) group on ability and achievement were so low as to exclude them from being considered for participation in the acceleration program.

A comparison was made of WISC and CTMM scores of the fifth grade accelerated group. The pupils in the accelerated group had been given the WISC at the end of the second grade and the CTMM in the fifth grade. Their CTMM IQs averaged nine points higher than those of the WISC. Differences between the pupils' total WISC IQs and CTMM total IQs ranged from -34 to 27 points, with a median of +11 points. Differences between these WISC verbal IQs and the CTMM verbal IQs ranged from -28 to 27, with a median of +12 points.

Chronological Age Comparisons. As of May, 1965, the average difference in chronological age (CA) between a fifth grade accelerate and his fifth grade MA control was -13 months, and the differences in chronological ages ranged from three to 22 months; however, in all instances the pupils in the control group were older than the accelerated pupils. The mean difference between the CA of a fifth grade accelerate and his fourth grade control was two months;

the range was from -9 months to 12 months. The mean age of the fourth grade controls was nine years and ten months; that of the fifth grade accelerates, ten years and five months. The accelerates averaged seven months older than the fourth grade controls. The average age of the 4C (NC) group -- the partial 4C group -- was nine years and nine months.

The Family Position of Pupils. Of the pupils in the three groups, three who were the only children in their families were members of the accelerated group. Of ten 4C (NC) pupils, none was the only or first child in his family; most of them were either the middle or youngest child in their families. These findings may suggest a factor that is related to the lesser maturity evidenced by the 4C (NC) group. This may be a spurious finding, but such a relationship warrants consideration in other studies.

Achievement Tests. The pupil's school achievement was evaluated in several ways, including teacher ratings. Each accelerate was compared with both his fourth grade control and his fifth grade control on reading comprehension, arithmetic reasoning, mechanics of English, and spelling as measured by the CAT, which was administered in October, 1964. The total groups (5A, 5C, and 4C) were compared on the basis of average marks assigned by teachers during the final quarter of 1964-65, teacher judgments of outstanding and weak areas, and individual achievement in relation to district norms.

The median difference between fifth grade accelerates and their MA controls in reading comprehension test scores was .1 grade score; the range of differences was from -2.5 to 1.9 grades. The accelerates' scores in reading comprehension were about equal to those of the fifth grade pupils with whom they were matched for mental age. The median difference between the accelerates and the equally bright fourth grade pupils who, for a variety of reasons, were not accelerated was 2.0; the range of differences was from -.6 to 5.5. The accelerates scored, on the average, two grades higher than pupils of similar age and intelligence. The 4C (NC) group, when compared with their paired fifth grade accelerates, had a mean difference of -2.2; the range of differences was from -4 to 5.5. A chi-square test for difference between medians of the 4C (NC) and 5A groups was 5.05 (p less than .05). While the selected fourth grade controls compared favorably with the accelerates on CTMM scores, their average reading comprehension score on CAT was significantly lower.

The median difference between the accelerates and the matched fifth grade controls in their arithmetic reasoning test scores was .8 of a grade; the range of differences was from -1.1 to 2.2. The median difference between the accelerates and the matched fourth grade controls was 1.4 grades; the range of differences, from .2 to 3.9. The median difference between the accelerates and the 4C (NC) group was 1.65 grades; the range of differences, from .2 to 3.9. The accelerates surpassed the fifth grade controls by nearly one grade and the fourth grade controls by about one and one-half grades.

The median difference in mechanics of English scores of the accelerates and those of the matched fifth grade controls was -.4 of a grade; the range of difference, from -4.0 to 1.5. When compared with the matched fourth grade controls, the difference was 1.4; the range of difference, from -2.1 to 5.7. The median difference between accelerates and the 4C (NC) group was 1.7, and the range of differences was also 1.7. The accelerates scored about half a grade below other fifth grade pupils of similar MA but about one and one-half grades above their nonaccelerated IQ and CA peers.

On spelling, the accelerates and pupils in the fifth grade control groups had a median difference of -.4 of a grade. The range of difference was from -3.8 to 1.7. A comparison of the accelerates with the fourth grade controls revealed a median difference of 1.0 and a range of difference from -1.4 to 5.0. The accelerated group averaged about half a grade below the fifth grade controls and about one grade above their fourth grade controls in spelling achievement.

Although the accelerates did not surpass the fifth grade controls of similar mental age on all the achievement subtests given at the beginning of the second school year after acceleration, their average achievement was comparable. The accelerates, generally, surpassed the pupils who were not accelerated. The most consistent superiority was in arithmetic in which all the accelerates surpassed the pupils in the fourth grade with whom they were matched for IQ. No significant differences appeared in achievement between the 4C groups and the partial group, 4C (NC). This result was expected because the partial group comprised 61 percent of the fourth grade control group.

In the four academic areas surveyed, the percent of fifth grade accelerates in the upper quartile of their grades was materially greater than the percent of fourth grade controls in the upper quartile of their grades. The percent of fifth grade accelerates and fifth grade controls above Q_3 was similar for all areas except arithmetic reasoning; success on this test seemed to be associated with grade level as well as with IQ. All fifth grade accelerates and their older MA controls rated above the third quartile on reading comprehension. On arithmetic reasoning, one 5A and five 5Cs fell in the third quartile, but all others were in the top quartile, or above Q_3. In mechanics of English and in spelling, all groups exceeded the district norms. In English, two fifth grade accelerates and one control fell in the third quartile, and one from each group scored below the median for English. Several individuals fell below Q_3 in spelling.

Achievement tests were administered to the fourth grade accelerates in October following the third grade summer school program. In this instance, the accelerates' scores in all areas were above the third quartile of the district's norms for the fourth grade. In fact, this group of accelerates, in relation to others in the same grade, did as well as or better than the fifth grade accelerates who were compared to other pupils in the fifth grade.

The average achievement of accelerated pupils in the fifth grade was computed when three or more accelerates were enrolled in a school. When their achievement in each area of the CAT was compared with the norms for the school in which they were enrolled, the accelerates, with two exceptions, were above the third quartile; in each of the two exceptions, the accelerate failed to attain this level on only one subtest.

Ratings by Teachers. The teachers were asked to indicate each pupil's achievement in reading, mathematics, language arts, social sciences, and science and health. The average mark for each pupil was determined, and these marks were used to compare the achievements of the groups. This comparison revealed that there was little difference between the achievement of the accelerates and that of the controls or between the fourth and the fifth grade groups. No pupil averaged below a C grade score, and only two had C averages -- one an accelerate and the other a control. The marks of the accelerates were comparable to those of other pupils with similar ability who were not accelerated and to those of older pupils of similar mental age who were in the same grade.

The teachers were asked to suggest areas in which the accelerates and pupils in the control groups made outstanding achievement as well as areas in which they had not made adequate progress. The teachers cited 14 accelerates, nine pupils in the fifth grade, and 16 pupils in the fourth grade as being outstanding in at least one subject. And they cited five accelerates, six of the matched pupils in the fifth grade, and 16 matched pupils in the fourth grade as needing special help in one or more of the subjects in which they were rated. It was found that a teacher's rating of "outstanding" was apparently more closely related to the pupil's IQ than to his MA.

The teachers were also asked to rate each pupil's progress in each of four areas on a five-point scale. The areas were achievement in terms of (1) potential; (2) creative production; (3) social maturity; and (4) emotional health. No important differences were found between the teachers' ratings of fifth grade accelerates and their older peers of comparable mental age or between the accelerates and IQ peers who were not in the acceleration program. The ratings of 4 or 5 scored on the five-point scale were distributed among the three groups as follows: four to accelerates, two to fifth grade controls, and four to fourth grade controls.

Teachers were also asked to answer this question: "Do you think the pupil's present grade placement is a good one for him?" They reported that they thought five of the accelerates should be in the fourth grade. The reasons they gave were: pupil requires too much supervision as an accelerate; pupil's physical development not sufficiently advanced; pupil's maturity not sufficiently advanced; and pupil's social development not adequate. However, the teachers thought that 14 of the accelerates were correctly placed in the fifth grade and that three of the pupils in the fourth grade control group should be in the fifth grade acceleration program. In fact, the teachers thought that one pupil who was in the fifth grade control group should have been advanced one or two grades. All the other pupils in the fourth and fifth grade control groups were thought to be properly placed.

Questionnaires to Parents. A two-page questionnaire was mailed to the parents of every one of the 56 pupils in the accelerated and control groups. Of this number, 47 were completed and returned. Those returned represented 84 percent of the parents of pupils in the 5A group, 89 percent of the parents of pupils in the 5C group, and 78 percent of the parents in the 4C group. No important differences were found among the three groups of parents.

However, it should be noted that two of the fathers and one of the mothers had not completed the eighth grade and that three of the fathers and four of the mothers were not high school graduates.

The pupils' parents were asked to check whether, in their opinion, the child's well-being during the two years he had been in the acceleration program had remained the same, improved, or degenerated. Their ratings were on sleeping and eating habits; physical conditions of nervousness, tiredness, and illness; and mental and social conditions of temper, friendliness, and enjoyment of life. The averages of the parents' ratings indicated that the well-being of eight of the accelerates was better; that of three, worse; and that of five, the same. In general, the pupils' parents were of the opinion that participation in the acceleration program had resulted in the pupils' having improved mental and physical health.

Interviewer's Judgment. Each of the pupils in the accelerated and control groups was interviewed, and most of them were observed in the classroom or on the playground by Lillian Troll, Special Consultant to California Project Talent. She then reported the conclusions she formulated from the information she gathered from the interviews and observations as follows:

> Almost all were attractive, pleasant, and responsive. Only one of the girls--the group was overwhelmingly female--showed inappropriate efforts to gain special affection and attention. She was an accelerated child. Only one--also a girl--was nearly unapproachable and reserved. She was a fourth grade control who has had many problems in the past. Though about 10 percent of the children came from broken homes or homes with known mental illness, the children concerned seemed no more maladjusted than the others. The interviewer felt that ten of the children could profit from some form of counseling. Four of these ten were accelerated children, two were fifth graders, four were fourth graders. . . . A number of incidental factors were identified which played a large role in the success of acceleration. The character of the particular school was clearly a determining factor--its socioeconomic environment as well as the attitude of the principal and teachers toward the policy of acceleration. The size and physical coordination of the child was another important variable. Those children judged the most successful accelerates by the school personnel were tall, passive, and nonthreatening girls. Those judged least successful were short, nonathletic, restless, or threatening in their reaching out for experience.

In the structural portion of the interviews, the pupils were asked to tell whom they liked to play with or talk to most, to rank their school subjects for interest, to state their extracurricular interests, to tell what they liked best about going to school, and to say what they would most like to change about school. The responses made by each pupil were interpreted on a five-point scale on a global rating. On this scale, a rating of 1 was defined as "very interesting, involved with life and living, gets a lot out of most activities"; a rating of 3 as "makes a rather bland impression, routine productivity at home and at school"; and a rating of 5 as "depressed or agitated, gets no pleasure from most of his life activities." Pupils with high IQs were judged to be more alert, interesting, and productive than those of greater chronological age and similar mental age (lower IQs). Few pupils received a rating of 4 or 5. None of those in the accelerated group received a rating of 5, but three received a rating of 4. A rating of 4 indicates that these pupils, if properly placed in the acceleration program in the first place, have encountered difficulties and are in need of counseling or some other special attention.

Fourth Grade Accelerates. Data similar to that obtained for fifth grade accelerates and their controls were collected for fourth grade accelerates, the second group to enter the program. Of the 12 pupils accelerated in 1964, only seven of them -- six girls and one boy -- were enrolled in the district one year later. In the spring of 1965, each of these seven pupils was judged by his parents and teacher as doing well in his schoolwork and as being successful in making the necessary emotional adjustments.

The achievement test results for the fourth grade accelerates in reading comprehension, arithmetic reasoning, mechanics of English, and spelling were in the top quartile of the norms for the district. When teachers assigned scholastic marks during the last quarter of the fourth grade, three of the accelerates were given an average of A; and four, an average of B. Only two of the accelerates were reported as being in need of special help in one subject. In general, the ratings given by teachers on the academic, creativity, social maturity, and personal maturity scales averaged higher for the fourth grade accelerates than for the fifth grade accelerates. The teachers agreed that the grade placement of six of the pupils was appropriate, but they expressed the belief that the grade placement of the seventh pupil should be studied. As a group, the fourth grade accelerates appeared to have made excellent progress during their first year in the acceleration program.

Summary of the Evaluation in Ravenswood

This descriptive study concerns the first two classes of accelerated pupils in the Ravenswood City Elementary School District's individual placement program for academically talented pupils. Comparisons were made of a group of 19 accelerates in the fifth grade with a fourth grade control group matched for IQ and with a fifth grade control group matched for mental age. The data suggest that while some pairs within the groups were not well matched, the groups as a whole were reasonably well matched. Brief statements of the results of the evaluation follow:

- On standardized achievement tests, accelerates were in the upper quartile in nearly all comparisons with district norms, as were their older fifth grade controls of similar mental age. The accelerates exceeded the performance of nonaccelerated controls of similar IQ in reading comprehension, arithmetic reasoning, mechanics of English, and spelling.

- Teachers' ratings for subject achievement, academic strengths and weaknesses, and adjustment and productivity were similar for accelerates and for the control groups.

- Parents' responses on questionnaires regarding pupils' health and emotional status were similar for accelerates and for controls.
- The results of interviews with the accelerates and the controls indicated greater similarity than difference in the range of personality and interaction characteristics of the groups. The psychologist found that the accelerates, as a group, were somewhat more interesting and alert than the fifth grade controls and that each group contained about the same number of pupils who apparently needed the help of a counselor.
- The fourth grade accelerates, who had been selected on more stringent criteria than the fifth grade accelerates, showed strength similar to that of the first group of accelerates in all phases of the evaluations that were completed.

Evaluation of the Placement of Individual Accelerates in California Project Talent[2]

The evaluation procedures used in the Ravenswood City Elementary School District and those used in the Pasadena City Unified School District, the two school districts that participated in acceleration programs conducted in the California Project Talent, were reported in detail, for they are typical of the procedures that may be employed to advantage to determine the value of educational innovations in similar programs. Each of these districts studied the effectiveness of an acceleration prototype in which pupils who had completed the second grade were enrolled in a special summer session program and then placed in the fourth grade at the beginning of the fall term. Both districts tested their selection criteria and their educational provisions by evaluating the school progress and overall adjustment of the accelerates, but each district made its study in a different way. Pasadena City Unified School District, the larger of the two districts, used objective measures and machine data processing techniques primarily; in addition, the district used some less objective data provided by the parents and teachers of the accelerates. Ravenswood City Elementary School District, the smaller of the two districts, used case study techniques primarily and only the results of standardized tests that were administered to all pupils in the district.

In each instance the purpose of the evaluation was to determine the adequacy and appropriateness of the measures used to select pupils for participation in the acceleration program, especially in relation to the effect the advanced placement from second to fourth grade had upon the pupil advanced. To accomplish this task, the following steps were taken:

- Step 1. Formulated criteria to determine whether a pupil's placement in the acceleration program was suitable, questionable, or unsuitable.

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[2] Mildred C. Robeck, "Evaluation of the Placement of Individual Accelerates in California Project Talent." Report to California Educational Research Association, 44th Annual Conference. Palo Alto, California, March 11, 1966.

- Step 2. Compared each pupil's relative standing within his present class of older peers. In the Pasadena project, the results of standardized achievement tests were used for this purpose; in the Ravenswood project, rating scales for individual profiles of developmental characteristics and intellectual functioning were used.
- Step 3. Reviewed achievement and behavior records of each accelerate whose placement was apparently other than suitable in terms of the criteria formulated. In the Pasadena City Unified School District, teachers' ratings and the results of the parent surveys were reviewed. In the Ravenswood City Elementary School District, the standardized test results were reviewed.
- Step 4. Determined for each accelerate suitable placement.
- Step 5. Summarized study findings and presented recommendations regarding placement.

Criteria for suitability of placement in the Pasadena City Unified School District were performance scores on each subject area covered by the standardized achievement tests that were administered. The scores of all the pupils in the first group of accelerates who had continued in the program were utilized in making the evaluation.

The achievement test scores of each of the accelerates were reviewed individually for evidence of weakness in any curriculum area. The pupils were ranked according to their scores on the Iowa Test of Basic Skills within quartile ranges established by the test scores made districtwide.

The placement of accelerates who ranked above the national norm for the fifth grade were rated "suitable." The placement of each pupil who did not attain this rank was reviewed on the basis of test scores made by him on achievement tests administered previously, the pupil's relative productivity in school, his personal characteristics, and his intelligence level.

The placement of each pupil whose placement was reviewed was rated as "suitable," "questionable," or "poor," the rating depending upon the data revealed in making the review.

The criteria for suitability of placement in the acceleration program employed in the Ravenswood City Elementary School District were teacher ratings of the accelerates' intellectual functioning, school performance, physical development, social development, and emotional development that were as high as or higher than the average ratings of the accelerates' older classmates.

The teachers of the accelerates in grades four, five, and six were asked to rate each accelerate on a five-point scale that had been developed by the staff of California Project Talent for rating gifted pupils in significant areas of development. The teachers were instructed to include the bottom 10 percent of the class (or three pupils) in the "1" or low category and the top 10 percent (or three pupils) in the "5" or much category. The middle 50 to 60 percent were to be rated "3," those who fell between category "1" and category "3" were to be rated "2," and those who fell between categories "3" and "5" were to be rated "4." Each of the 13 teachers who participated rated only the accelerates he was teaching.

Each time an accelerate's rating indicated weakness in any one area, especially one in which his performance had been measured on a standardized achievement test, all evaluations of his performance were reviewed. These included the reports of observations of the accelerate's behavior that had been made by project and school district consultants. Each accelerate's placement was judged by the project consultant as suitable or inappropriate.

Data on suitability of grade placement developed from previous acceleration studies and from the two current studies were combined to determine the minimum standards that should be set for determining whether a pupil might be placed in an acceleration program with reasonable assurance that his advanced placement would be satisfactory. And the data collected for each of the pupils who had participated in the current programs were studied to determine which of them might be considered for participation in a study which involved advancing their grade placement another grade.

Pasadena Grade Placement Evaluation

In Pasadena, 47 accelerates who were in the fifth grade were given achievement tests. As a group, the accelerates' scores exceeded the norms for the district in all areas: vocabulary, reading comprehension, language, and arithmetic. Their average score was within .1 grade point of third quartile maximums (Q_3) in all areas.

Over half of the accelerates ranked in the top fourth of the grade to which they had been accelerated. The accelerates made the strongest showing in reading comprehension; 64 percent ranked in the top quartile. They made the weakest showing in arithmetic skills; 51 percent ranked in the top quartile. None of the accelerates placed in the lowest quartile on district norms, which generally were higher than national norms.

However, 11 accelerates scored below the national norm of 5.1 in one or more of the achievement subtests. But the classroom performance, physical and social maturity, and achievement of six of this group indicated that the advanced placement was more suitable for them than regular placement at the fourth grade level would have been. The grade placement of four was considered to be "questionable"; the placement of one, as "unsuitable." Conclusions drawn regarding the placement of the 11 accelerates who scored in one or more areas below the district norm are summarized in the following sections.

Accelerate A ranked in the second quartile in arithmetic, although her grade average of 6.3 was more than a grade above her advanced placement. Her school performance was excellent, her physical development was advanced, and her social and emotional patterns were more like those of older grade peers than like fourth grade pupils. Her present placement was considered as excellent.[3]

Accelerate B scored slightly below the district mean in arithmetic, but his grade average of 6.4 was more than a grade above the one he was in. His performance in school and IQ of 145 would seem to indicate his grade placement was the best possible for him even though it was apparent that he should be given special help in arithmetic.

Accelerate C ranked in the second quartile, or below the mean, in arithmetic. Nevertheless, her placement was considered suitable because of her excellent performance in the classroom, superior performance on previous arithmetic achievement tests, and mature social and emotional behavior.

Accelerate D was slightly below the grade norms in vocabulary and in arithmetic skills. However, her overall grade achievement of 5.3 was slightly above the norm. Her teacher and her parents had rated her performance and her adjustment as generally good, the second highest category of five. She had transferred, following acceleration, to a school where there were few identified gifted pupils and where she did relatively well in an older group. Her advanced placement was considered as suitable.

Accelerate E rated a grade or more above national norms in all areas except arithmetic. In arithmetic, her score placed her in the second quartile. An IQ of 134, appropriate physical maturity, and superior achievement in language indicated that her accelerated placement was suitable. However, it was apparent that she should be given special help in arithmetic.

Accelerate F made a score in language that placed her in the second quartile of her grade. However, her IQ of 139 and her ability to read to the grade level of 7.1 should help her to overcome the language difficulties resulting from her cultural background. Her performance in the classroom, her social and personal adjustment, and her overall grade achievement indicated that her grade placement was suitable.

The five accelerates other than those already mentioned were doing less well in school achievement than their IQs would lead one to expect, but none was achieving in the lowest quarter of his grade. All the accelerates appeared able to carry fifth grade work, but their placements were questioned because of the pupils' achievement test scores, which were relatively poor in comparison with those of the other accelerates.

Accelerate G scored near the mean in all subtests and had a grade average of 5.1. She had been given generally satisfactory ratings by both her teacher and parents. In general she had been doing average work in the classroom. There was no evidence to indicate that placement in a younger group would result in her being motivated sufficiently to ensure greater school progress. However, her accelerated placement must be considered as questionable until her school progress is commensurate with her intellectual ability, or at least above the average for her age group.

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[3] Data for each pupil are shown in Table 6.

Accelerate H made a grade average of 4.8. His placement in a group of extremely accomplished pupils in a school that ranks above the district's norms on standardized tests is at least questionable. This boy and his parents should be counseled regarding the questionable nature of his advanced placement and advised regarding the advantages he would enjoy by being placed in an average group before any change is made in his placement.

Accelerate I placed slightly below the mean in four of five subtests but made an overall grade average of 5.0. Both her parents and teacher had reported that she was making excellent progress in school. This progress and her relatively secure status in her school and class made it apparent that her placement is appropriate. But in case this girl should transfer to another school, her grade placement should be reviewed at that time to determine whether she should be retained in the acceleration program.

Accelerate J ranked slightly below the norms for his grade in four of five subject tests, but he still ranked above the norms for the grade he would be placed in on the basis of chronological age. His school performance had been consistently rated as above average, and his parents had reported his adjustment as being good. However, his achievement test scores make it apparent that his progress in school is less than his mental ability permits. His placement appears to be suitable, certainly more advantageous than placement in a regular class of fourth grade pupils.

Accelerate K was considered to be incorrectly placed and in need of professional attention, even though his reading achievement score was more than a grade above that of his advanced placement. His arithmetic achievement score, however, was a grade below.

This pupil had a record of poor classroom performance, and his parents had reported that he was having difficulty making normal adjustments. His advanced placement was considered unsuitable because of the difficulties he was encountering and because of the possibility of one with an IQ of 144, which he had, reacting quickly to wrong motivations and developing wrong notions regarding his worth.

Ravenswood Grade Placement Evaluation

In Ravenswood the evaluation of the advanced placement of each pupil began with the classroom teacher and was carried through on the basis of quantitative test data. Altogether, 31 pupils were studied, and their grade placement was evaluated. Accelerates among older classmates, especially those in the fifth grade, tended to cluster in the moderate-to-high categories on intellectual functioning. On the physical development profile, the accelerates clustered near the center of the continuum. On posture ratings of good, average, and poor, 20 accelerates were rated as good, ten as average, and one as poor. On body structure 17 were rated as small of stature, ten as being of medium build, and four as being more physically developed than most.

Teacher ratings in school performance, social development, and emotional development were shown as number of frequencies for the total group on each item. Compared with older classmates, accelerates evidenced greatest strength in the language arts, mathematics, and social science and average or low performance in art, construction, handwriting, and physical education. In social development the accelerates fell toward the upper end of the continuum for happiness and self-confidence and rapport with their teacher. Ratings in the "1" column were accumulated by two pupils in all areas except popularity with the opposite sex, an area in which the accelerates appeared to be less favored than their grade peers. On the emotional development items, the accelerates showed greater conformity to adults than to peers, modality at the "4" level in emotional stability and in an openness to new experience, and a strong shift to the left of the continuum in dominance and aggressiveness.

Suitability of Accelerates' Placement

The appraisal of the suitability of advanced placement for 31 accelerates resulted in the placement of 26 being rated as superior -- that is, the accelerated placement was the best grade placement for each of the pupils at the time his case was reviewed. After additional data were gathered, the placement of three more accelerates was rated as adequate even though these pupils were having some problems that were apparently being caused by personal characteristics, which a lower grade placement would not alleviate. The placement of two pupils was thought to be questionable or unsuitable -- that is, it was decided that these pupils would be likely to perform better in their regular grade than in an advanced grade.

The descriptions in the paragraphs that follow make apparent the basis upon which decisions were made regarding whether an accelerate's placement was adequate, questionable, or unsuitable.

Maria spent two school years characterized by low motivation, poor work habits, and grades ranging below average. Because she was assigned to a regular sixth grade class rather than a gifted cluster group, her teacher was able to develop her classroom performance and interest in schoolwork to a level of relative strength within her class. Her placement was appraised as adequate.

Sheila had relatively low ratings in social and emotional development, but her IQ on group tests of mental ability ranged from 125 to 146, and on the WISC it was 120 ± 4.5. Her achievement test scores made at grade 5.1 ranged in grade placement from 5.8 to 7.1. The average placement was 6.4. Her father was a professor of physical science, and her mother was a college graduate. Sheila, who was taking swimming and ballet lessons, said she wanted to work and play with others, but it was reported that her peers did not like her. The psychologist considered her poorly integrated and somewhat withdrawn. Placement in a lower grade was considered undesirable academically. There was no evidence to suggest she would relate well to younger peers, nor that a lower placement was likely to solve her personal problems. Possibly her problems would have been less conspicuous, at least to the teacher, if she had not been accelerated. However, a grade change was considered undesirable.

Joan was rated low by her teacher in several social and emotional characteristics, but she was unusually large and advanced physiologically. At grade norm 4.1, her achievement scores ranged from 4.1 to 6.4. She had several playground fights, but the teacher's efforts to help her improve her relationship with peers was accompanied by an upward turn in Joan's popularity. However, she appeared to need this kind of help with each new assignment. Her wishes were "a new car," "to be a nurse," and to "go to Disneyland." Her advanced placement seemed to be the best possible because of her large size, adequate academic performance, and age, which was near that of others in the grade.

Terry, a fifth grade girl, was rated by her teacher in some low categories on the developmental scales and in the "2" column in mathematics and physical activities. Her home problems were numerous and extreme -- economic, parental, cultural, and educational. On the test she had taken in October, her grade placement scores ranged from 5.2 to 6.7, with an average of 5.9. On local norms she averaged at the 72 percentile. Although her achievement test scores were slightly stronger than Joan's, her placement was more questionable. Because Terry was younger, smaller, and less aggressive than Joan, she would have fit into her regular age group better than Joan. In spite of Terry's situation at home, she might have found in school the encouragement and motivation she needed if she had remained at the top of her regular class. And the difficulties she experienced in doing homework might have been of less magnitude if she had been one year older.

Robert's teacher rated him below average on a number of academic and adjustment items and reported that his motivation was low, that he suffered from excessive protectiveness on the part of his mother, and that he carried an overload of extracurricular activities. On a Binet test administered by the psychologist, Robert's IQ was 130+. The committee that studied his placement recommended him for possible acceleration. He lived with two siblings and his mother, a Brazilian. His speech was not good. He was handsome, his size as compared with that of older classmates was average, and his behavior in school was that of a conformist. His advanced placement was considered unsuitable because the motivation he had evidenced to do the work in earlier grades was lacking in the fourth grade. However, his learning rate should be sufficiently great for him to progress more rapidly than the pupils of average ability in his regular grade placement if he can be kept well motivated.

The evaluation made of the acceleration programs offered by the two districts lacked many of the refinements that would have been necessary for experimental research. However, the evaluation did demonstrate the success of an overwhelming proportion of pupils who were selected at the second grade level by the screening and nomination proceedings described and who were accelerated after they had participated in a special summer program.

California Project Talent was designed initially to include a second advanced placement from grade five to grade seven for certain of the accelerates. The ones thus advanced would have completed a summer program planned to replace the work in grade six. This evaluation showed that five students in Pasadena and two in Ravenswood would have been able to meet extremely high criteria from which a selection committee might have made such a decision. Unfortunately, the administrative problems associated with one acceleration eliminated the probability that the program would be extended upward at the demonstration centers in the near future.

The characteristics for probable success in acceleration programs at second grade level are known. Some adjustment problems can be anticipated in any elementary school group, whether the students are assigned to age-peer classes or not. Quite probably some students experienced a reduction in frustration because they were better able to communicate with older classmates than with children of their own chronological age. Professional personnel must be expected to guess wrong occasionally, especially in cases where some factors favor acceleration while other factors weigh negatively. There is no perfect placement for some pupils, but to deny eight or nine children a suitable school placement because of the possibility of making a misjudgment on the tenth child is indefensible professionally in the light of the evidence.

In Chapter 3 it was reported that criteria for acceleration were tightened and refined during the course of the project. Observation of the children in their classrooms and interviews with their teachers seemed to confirm the impression that the second and third classes were better selected for acceleration than were the first classes. The evaluation did not confirm that impression. In Ravenswood, where increasing numbers of children were given enrichment rather than advanced placement, the accelerates were fewer and therefore more conspicuous than before. Although these groups were small, the overall ratings by the teachers and a thorough review of statistical and other data in the case histories did not reveal a reduction in adjustment problems, nor an increase in academic achievement when "maturity" criteria were added. If the comparisons between accelerates in Ravenswood and their controls who were not accelerated are valid, many children throughout California are being denied educational opportunities for which project children demonstrated both readiness and ability. Unless one considers popularity with the opposite sex a disadvantage to elementary school children, the evidence was lacking in this evaluation that social or emotional development was any different in accelerated children than in nonaccelerated children.

Special Considerations

In Ravenswood the educational programs of 25 of the 31 accelerates were enriched beyond that of the grade to which they had been advanced. The achievement of nine of this group was so much greater than the majority of the accelerates and others in the grade that it was apparent that the nine would have been better placed in a special class for the gifted than in an advanced grade. However, two of the accelerates were recommended for a second advancement in grade placement, and one was recommended by his teacher as meriting consideration for a second advancement.

In Pasadena the examination of test data for the accelerates revealed five of the pupils whose school progress in all curricular areas was one and a half grades above the norm for the grade to which they had been advanced. And since it was found that these pupils, two boys and three girls, also had IQs in excess of 150, it was decided that the case of each of the pupils should be studied to determine the advisability of a second advanced placement.

Summary

Over 85 percent of all the pupils in both the Ravenswood City Elementary School District and the Pasadena City Unified School District, according to their scores on the standardized achievement tests administered and on the rating scales completed by their teachers, ranked in the upper half of the classes to which they were accelerated. Only two of the pupils appeared to have been unprepared for advanced grade placement. About 10 percent of the accelerates evidenced certain academic, emotional, and physical problems, which in some instances possibly would have been minimized by letting the pupils progress at the regular rate.

Although the evaluations made of the acceleration programs offered by the two school districts were somewhat less scientific than those generally employed in experimental research, they were sufficiently scientific for the purpose. The evaluations made apparent the fact that advanced placement in school offers the gifted pupil opportunity to utilize his abilities to better advantage than he could by following the regular grade advancement procedure. And they also made apparent the fact that gifted pupils who are properly prepared through participation in special summer programs adjust without difficulty in advanced classes. That is, they do the advanced work successfully and make the adjustments needed to have a peer relationship with the older pupils in the class to which they are advanced.

HOLD THE ANSW

Most children selected for the acceleration program do extremely well in school; they are a credit to their parents and their teachers....

On the basis of the classroom behavior of pupils, teachers were able to project instructional procedures that tended to broaden the intellectual functioning of pupils.

Generalizations and Recommendations

Some generalizations seem justified on those points where the observations and experiences of the professional staff were consistent with those of earlier investigators. In two centers--separated by 450 miles of freeways and the imaginary boundary between northern and southern California--the common experiences of two staffs working independently were considered worthy of documentation. These conclusions, therefore, represent the consensus of experienced personnel, the common findings in the evaluation data from the two centers, and the published reports of previous studies. The generalizations are each followed by two subsections: (1) brief reviews of evidence presented earlier in the report; and (2) some recommendations for program implementation.

Generalization Number One

Appropriate Screening Is the Key to Successful Placement in Acceleration Programs.

The factors needed for successful acceleration from the second to the fourth grade are known and can be implemented. With a minimal IQ criterion of 130 assumed, the following should be considered when children are screened for placement in acceleration programs:

1. Age. Children from the older half of the class are more likely to be successful in advanced placement than younger classmates.
2. Sex. About twice as many girls as boys met the rigid screening criteria established in the demonstration centers.
3. Physical characteristics. Pupils who are tall--at or near average height in the class to which they accelerate--are less conspicuous and less likely to receive unfavorable attention than small children. A high energy level and a good attention record are important, too.
4. Familial support. A superior learning environment at home helps the child keep pace with a fast moving class. Children from intellectually deprived homes or those whose parents have not learned the ways to support and supplement the educational program are at an extreme disadvantage. The influence of the home is important in building positive motivations and realistic aspirations.

5. Personal relationships. Children with the warmth and adaptability to form new friendships readily make the adjustments to new classes and older children more easily than do those who are shy and aloof.

6. Emotional independence. A resilient reaction to competition, the strength to remain undaunted by superior performance in other pupils, the willingness to accept one's own best effort, and strong motivation to succeed in school are some of the traits that help to prevent the academic shock some individuals experience upon acceleration.

Review of the Evidence

During the three-year period of the demonstrations, all accelerated children who met the factors cited and who were prepared academically for the fourth grade adjusted without difficulty. Klausmeier's groups were accelerated successfully with a lower intelligence requirement (125 IQ), but they were chosen from the older half of the class.

Recommendations for the Programs

When children are selected for acceleration, the placement can be made with confidence for those children who meet all the factors cited. The placement becomes difficult for children who have some but not all of the characteristics known to be important. For example, the small girl, whose many friends are very important to her, might be accelerated only in situations where cluster groups of young children were accelerated together. The boy who was near minimum age for his class might be recommended for enrichment rather than acceleration, particularly if achievement in sports happens to be high in the father's hierarchy of values. Staff review of each case must determine when a child has compensating strengths to overcome his known disadvantages. New programs possibly should be limited to candidates whose prognosis for success is extremely good.

Generalization Number Two

Prior to Advanced Placement, Candidates for Acceleration Should Have Mastered All Important Academic Skills for Beginning Work in the Next Grade.

Greater than average skill development was expected of the accelerated pupil in most situations in the demonstration centers; an average range of academic abilities was not adequate in the new class. To avoid feelings of rejection by self, classmates, teacher, or parents, the accelerate at the fourth-grade level needs skill in manuscript handwriting, complete knowledge of arithmetic processes taught in the primary grades, spelling knowledge of common service vocabulary, and independent word-attack skills as minimal accomplishments.

Review of the Evidence

Case study revealed that both parents and teachers tended to evaluate critically the children whose daily performance was average or below in any area of the curriculum. Project evaluation of accelerated groups showed arithmetic grade placements to be lower than reading and language grade placements on national norms. As rapid learners, gifted children typically achieved at or near the top of the class by the end of the first year following acceleration; but evidence of initial difficulty and dissatisfaction occurred more frequently than is necessary or desirable.

Recommendations for the Programs

Standardized tests that measure quantitative and language abilities should be used as part of the screening procedure, thus eliminating from the acceleration programs the child who is weak in mathematics. This is particularly important when the Stanford-Binet rather than the WISC is used as the individual intelligence measure. At the second-grade level, achievement in both arithmetic and reading should be demonstrated near or above the 95th percentile on local norms. Special summer programs should be designed to identify any third-grade skills the children are lacking and to help the pupils attain those levels of performance necessary for having success in activities in the fourth grade. Whenever adequate skill development is not possible--even for very high IQ children--arrangements such as enrichment or special classes are preferable to acceleration.

Generalization Number Three

Intellectual Differences Between Accelerates Resulted in a Wide Range of Individual Abilities Within the Special Summer Classes and the Gifted Cluster Groups.

Even though the IQ continuum began much higher than in typical classes (130± 5), the scores ranged to 160 or more--sometimes beyond the ceiling of the test given. Within the high IQ group, achievement levels may be expected to vary due to differences in curricular emphasis from classroom to classroom, differences in learning opportunities in the homes, and differences in instructional level from school to school.

Review of the Evidence

As reported in the chapter on curriculum, special summer session teachers found extreme divergence between pupils, which was related only moderately to measured IQs. Teachers new to the program were surprised to find the range of individual differences in specific abilities to be greater than that of the regular unsectioned class.

Recommendations for the Programs

Materials designed for individual instruction but geared for a higher grade should be used for groups scheduled for acceleration. SRA laboratories in reading or spelling are examples of the range that is required; the green fifth-grade kits are examples of the level that is needed. Summer groups that include pupils assigned for enrichment only need materials geared somewhat slower but selected from outside the basic materials for the third grade. Special considerations, such as the use of a typewriter to ease the frustration of cursive handwriting, should be encouraged unless such provision handicaps the child in adjusting to the fourth grade.

Generalization Number Four

Variability Within the Individual Accelerates Was Apparent in Tests of Intellectual Functioning and in Classroom Behavior.

Differences between the individual's verbal and performance scores, discrepancy between his divergent and convergent production, and the uniqueness of creative behavior became an important part of the foundation for curriculum building and lesson development.

Review of the Evidence

WISC results in Ravenswood and the Stanford-Binet reports in Pasadena indicated that an unevenness in intellectual strengths was common rather than unique. On the basis of the classroom behavior of pupils, teachers were able to rate children on the Bloom taxonomy or on the Guilford structure and to project instructional procedures that tended to broaden the intellectual functioning of pupils.

Recommendations for the Programs

Teaching based on the conscious use of a comprehensive model of intellect can be utilized effectively in the special summer session for accelerates. Methods of instruction that emphasize discovery, problem solving, hypothesis formulation and testing, brainstorming, speculation, and manipulation are all techniques that give the pupil an opportunity to function in varied and stimulating ways.

Generalization Number Five

Administrative Procedures That Accomplish Acceptance of Gifted Children and of the Acceleration Program Within the School Community Are Essential.

Gifted children need acceptance for the same reasons that all persons need feelings of acceptance by their communities. However, these atypical children may need more or different kinds of help to gain the acceptance they need. And this help may be difficult to secure, since the public generally has shown more interest in supporting programs for the deprived than for the talented.

Review of the Evidence

As the changes from year to year in the acceleration programs indicated, the acceptance of this particular form of program adjustment for gifted children was not accomplished easily. Fortunately, atypical children tended to have atypical parents who frequently showed unusual awareness of the child's school placement and progress. Their aspirations for the child were sometimes well defined. They were eager for information about the program. However, school personnel who visited the demonstration centers indicated preference for enrichment programs over acceleration and special class placements.

Recommendations for the Programs

Parent meetings and parent conferences are needed prior to an organized program of acceleration and the advanced placement of the individual children. The community as a whole should be kept informed of the need for and the results of well-planned programs for the gifted child. Teachers should share techniques and be given special materials to do the work that is required; they need reinforcement for the supreme effort that successful instruction of the gifted entails.

Generalization Number Six

The Pupil's Need for Counseling at the Time He Enters the Fourth Grade Can Be Anticipated.

Accelerates differ in the intensity and duration of the adjustment period, but most of them could be helped by private or small group discussion periods. Questions about studies, self-doubts, or peer relationships can be examined outside the classroom, where a newly accelerated child may feel too insecure to reveal his problems.

Review of the Evidence

Parent questionnaires and pupil interviews indicated a time of frustration very often occurred soon after entry into the fourth grade. Few accelerates were found to need counseling at other times in the program.

Recommendations for the Programs

Administrators need to plan the testing and counseling needs for the acceleration program and to delegate the responsibility for testing and counseling to qualified personnel. The school counselor's and the psychologist's time should be allotted for three regular functions: (1) to make a psychological evaluation and recommendation as part of the selection procedure; (2) to conduct individual or group counseling at the time of acceleration; and (3) to receive and pursue referrals for counseling for the very few children who encounter difficulty in peer acceptance, learning problems, or motivational lapses.

Generalization Number Seven

A Period of Time Prior to Acceleration Is Needed When the Child's Functioning in the Classroom Can Be Observed and Appraised.

The relationship between IQ and school marks or between IQ and achievement test scores is positive, but the relationship in either case is neither extremely high nor very consistent. When pupils are screened on the basis of intelligence and achievement tests, an appraisal is needed also of the child's response to the group learning situation.

Review of the Evidence

Pasadena and Ravenswood programs were designed to provide a period of classroom observation before the teacher made a recommendation regarding the child's placement. In Pasadena it was found that identification during the first grade enabled the school to provide accelerated curricula during the second grade and to study the potential accelerate under conditions more demanding than those he would normally encounter in the regular work of the second grade. As the program evolved the decision to accelerate was made by the time the child was invited to attend the summer session.

At Ravenswood, where a high percent of minority children were enrolled, the pupils at the first-grade and second-grade levels needed more time to adjust to school life. Therefore, the Ravenswood program was developed so that gifted children would be identified by the end of the second grade and so that the special summer session could be used as a period of observation before final decisions were made regarding placement.

Recommendations for the Programs

Earlier identification of gifted children, preferably during kindergarten or early first grade, gives the school greater flexibility for individual placement and instruction. Early entrance to the first grade, as described in Chapter 2, avoids the curricular gaps which become increasingly difficult to fill as the pupil moves up in the elementary grades. Early enrichment of programs for gifted children can prevent some of the poor work habits and negative attitudes toward school that some highly intelligent children acquire before the end of the second grade. Differential programs, of which acceleration is only one, should be available for intellectually gifted and talented children who lack the classroom behavior patterns or growth characteristics conducive to successful acceleration.

Generalization Number Eight

Most Children Selected for the Acceleration Program Do Extremely Well in School; They Are a Credit to Their Parents and Their Teachers; Their Placement Is More Suited to Their Social and Academic Levels Than Is Placement with Age Peers.

The overwhelming proportion of the pupils who have been given advanced placement is inconspicuous in older groups. The group to whom the greatest benefits of acceleration accrue--the boys--experience greater problems in advanced placement than girls do.

Review of the Evidence

Studies of adult males who were accelerated indicated that they had somewhat better chances for completing college, entering a profession, and doing graduate study than was true of nonaccelerated males of comparable ability. Within the demonstration centers, Project Talent girls were more likely than boys to have the physical and social maturity found to be important for success in advanced placement. The girls outnumbered the boys in the program approximately two to one. In the evaluation studies reported in Chapter 7, almost nine of every ten pupils were considered highly successful in their accelerated placements, and approximately one of every ten showed some problems of development or adjustment not necessarily related to placement. Fewer than 4 percent were unsuccessful in accelerated placements.

Recommendations for the Programs

Not only high achieving children but also inconspicuous gifted children and the few with problems need to be identified if their potential is to be fostered in the school setting. Involvement of teachers and other school personnel in the process of individual placement helps ensure the provision of adequate education for the highly intelligent. Alternative forms of advanced placement, such as those outlined in Chapter 2, should be provided for boys who are academically superior but lack the physical maturation for acceleration at the elementary level.

Research Needed on Individual Placement

The implementation of earlier research in the design and conduct of California Project Talent revealed several areas where further information and more sophisticated data are needed. Much of the research on which current decisions are based was conducted years after acceleration took place, and no accurate description of an accelerate's program is available nor have adequate control groups been established. Some early studies lacked the instruments necessary for determining the side effects of acceleration or nonacceleration. Some studies did not make the statistical corrections which are necessary when certain groups vary greatly from the norm. All these factors suggest the need to restudy some early questions with modern research techniques. Some of the research needs follow:

- Longitudinal studies should be undertaken of the effects--positive and negative--of advanced placement on the social adjustment of the individual. Such a study would need a control group, established at the beginning of the investigation, with which to compare the experimental subjects.
- Comparisons of different kinds of programs should be made, and some attempt should be undertaken to establish which program is best for which pupil. Enrichment, tutoring, acceleration, and combinations of counseling and instruction could be compared wherever differential programs and large groups of pupils are available.
- The characteristics of teachers who succeed with accelerates should be studied; the effect of special education on the perceptions of teachers of gifted pupils should be explored. The impact on teacher morale and professional image should be examined--comparing staff members who are participating in special programs with those who are not.
- For boys, the point at which the advantages of acceleration outweigh the disadvantages should be established--and for which boys. Peer acceptance, participation in sports, and dating patterns need to be studied.
- For girls (and some minority groups), the role of counseling in career aspiration should be studied. Early studies of the failure of girls to use the opportunity inherent in advanced placement for graduate study should be replicated. Marriage patterns of accelerated and nonaccelerated gifted girls might be compared.
- The possibilities for earlier identification of intellectual giftedness and the earlier implementation of differential programs should be explored. Prevention of negative conditioning to learning and the teaching of positive motivational patterns should be attempted and tested.

For girls, the role of counseling in career aspiration should be studied.

Appendix A

CASE STUDY FORMAT

Part I
BACKGROUND INFORMATION

Confidential Information

Date ____________________

Pupil's name ______________________________ Sex: M F Birthdate ____________________

Father's name ______________________________ Mother's name ____________________

Address ______________________________ Phone ____________________

1. Summary of School Experience

School	Location	Dates	Grades	Age

2. Parents

Type of information	Father	Mother
Educational background		
Occupation		
Special interests and aptitudes		

3. Description of Family Unit

Marital status, deaths, other adults in home, and the like	Date

4. Siblings in Home

Name	Age	Sex	Academic potential	Date

Record of Contacts with Pupils and Parents

Pupil's name ______________________

Date	Type of contact [1]	Initiated by	Purpose and summary

[1] Code: P - phone; L - letter; I - interview; C - conference

Appendix A--Continued

CASE STUDY FORMAT

Part II
HEALTH RECORD

Pupil's name ______________________________

1. Data relevant to Physical Development (nutrition, description of body build, appearance, posture, handedness, and the like)

Grade	Data	Entry by	Date

2. Energy Level

Grade	Low	Moderate			High	Rated by	Date
	1	2	3	4	5		

3. Current Problems or Handicaps (speech, hearing, vision, and the like)

Grade	Description	Entry by	Date

4. History of Illnesses or Problems

Age	Description	Entry by	Date

5. Health Tests and Measurements

Grade	Age	Height	Weight	Teeth	Hearing	Vision	Entry by	Date

6. Results of Medical Examinations

Grade	Results	Entry by	Date

Appendix A -- Continued

CASE STUDY FORMAT

Part III
SCREENING AND NOMINATION FORM

Pupil's name ______________________ Teacher ______________________

Birthdate ______________________ School ______________________

Grade ______________________ Date ______________________

Test Data

1. Academic Achievement Tests

Name	Results	Grade	Date

2. Group Ability Tests

Name	Results	Grade	Date

3. Individual Intelligence Tests

Name	Results	Grade	Date

4. Other Tests or Examinations

Name	Results	Grade	Date

Intellectual Functioning

Disregarding test results, would you rank this pupil in the upper 5 percent of his class in academic performance? In your opinion, is this child "mentally gifted"? Is classroom performance consistent with results of standardized tests?

Upper 5 percent?		"Mentally gifted"? (by state criteria)		Performance consistent with tests?	
Yes	No	Yes	No	Yes	No

Check the column which best describes the child's intellectual functioning. These items include a range of possible characteristics or objectives. A child is not expected to be high on all of them.

Item to be evaluated		Little		Moderate		Much
		1	2	3	4	5
1. Knowledge and skills (Possesses a comfortable knowledge of basic skills and factual information)						
2. Concentration (Has ability to concentrate; is not easily distracted)						
3. Enjoyment of school (Enjoys academic pursuits and assignments; likes school)						
4. Persistence (Has the ability and desire to follow through on work; concerned with completion; able to see a problem through)	In own interests					
	In assigned tasks					
5. Responsiveness (Is easily motivated; responsive to adult suggestions and questions)						
6. Intellectual curiosity (Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own, in connection with personal interests or group concerns)						
7. Challenge (Enjoys the challenge of difficult problems, assignments, issues, and materials)						
8. Perceptiveness (Is alert, perceptive, and observant beyond his years; aware of many stimuli)						
9. Verbal facility (Shows marked facility with language; uses many words easily and accurately)						

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
10. Fluency of ideas (Produces a large number of ideas or products, often very quickly)					
11. Flexibility (Is able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems)					
12. Sensitivity to problems (Perceives and is aware of problems that others may not see; is ready to question or change existing situations and suggest improvements)					
13. Originality (Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality)					
14. Imagination (Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights)					
15. Reasoning (Is logical, often generalizes or applies understanding in new situations, expands concepts into broader relationships, or sees parts in relation to the whole)					
16. Scientific method (Can define problems, formulate hypotheses, test ideas, and arrive at valid conclusions)					
17. Independence in thought (Inclined to follow his own organization and ideas rather than the structuring of others)					
18. Independence in action (Able to plan and organize activities, direct action, and evaluate results)					
19. Independence in work habits (Requires a minimum of adult direction and attention; possesses research skills to facilitate independent work)					
20. Elaboration (Concerned with detail and complexity; often involved with a variety of implications and consequences)					
21. Aesthetic appreciation (Enjoys and is responsive to beauty in the arts or nature)					

22. Describe any unpredictable behavior which interferes with study; e. g., wandering away from seat without apparent purpose:

23. Describe any unusual preoccupations such as "daydreaming" or "flights into fantasy" which lessen the pupil's learning efficiency:

24. Describe any learning characteristics which seem outstanding or would especially facilitate this child's progress in a challenging educational program:

25. Describe any learning difficulties the child might have in particular areas--difficulties which could hinder progress in such a program:

26. Describe any examples of the child's creative productivity:

The following list of subjects and activities is to be checked for (1) the child's apparent interest, judged by your observations of his classroom behavior; (2) performance, judged either by grades or quality of products or actions; and (3) the grade level at which the child seems capable of functioning.

Subject	Interest					Performance					Capability
	Little		Moderate		Much	Low		Average		High	
	1	2	3	4	5	1	2	3	4	5	Grade level
Art											
Construction or manipulation											
Dramatic expression											
Language arts											
Foreign language											
Handwriting											
Oral expression											
Reading											
Spelling											
Written expression											
Mathematics											
Music											
Physical activities											
Science											
Social science											

Comment on any intellectual characteristics you have observed which are not included in the preceding items:

Physical Development

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
1. Physical expression (Indicates that physical activities are a comfortable, enjoyable area for self-expression)					
2. Physical ability (Coordination, timing, agility, and ability to participate satisfactorily in organized games)					
3. Energy level (Has available resources of pep and vigor for carrying on most activities)					
4. Physical appearance (Appears neat, well-groomed; has appropriate clothes for age and group)					

5. Check the spaces which best describe the child's physical build and posture as compared with the rest of the class:

Physical build:		Posture:	
Small stature	_____	Good	_____
Medium build	_____	Average	_____
More physically developed than most	_____	Poor	_____

6. Describe any important aspect of the pupil's health or physical development which might affect participation in a challenging educational program:

____

____

____

____

____

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____

____

____

____

Social Development

Check the column which best describes this child's social development.

Item to be evaluated		Little		Moderate		Much
		1	2	3	4	5
1. Popularity (Others seem to enjoy and want to be with this child; frequently seen interacting with others in a social, friendly manner)	With same sex					
	With opposite sex					
2. Acceptance of others (Relates to others with genuine interest and concern; enjoys others; seeks them out; shows warmth)						
3. Status (Assumes public roles and leadership positions or enjoys considerable status in peer group)						
4. Social maturity (Able and willing to work with others; can "give and take"; is sensitive to the needs and feelings of others; shows consideration; observes rules of social conduct)						
5. Sense of humor (Ability to laugh at himself; gets enjoyment and pleasure from lighter moments in school day; laughs easily and comfortably)						
6. Sense of well-being (Seems self-confident, happy, and comfortable in most situations)						
7. Rapport with teacher (Two-way communication which seems to bring enjoyment to both child and teacher; relatively open and relaxed)						

8. Describe any characteristic of social behavior which you feel could interfere with this child's educational progress:

9. Comment upon the child's apparent capabilities for forming friendships and identifying with groups such as Boy Scouts, YMCA, and the like:

Emotional Development

Check the column which best describes this child's emotional development. Please note that a high score may not be desirable on all of the items which follow.

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
1. Emotional stability (Is able to cope with normal frustrations of living; adjusts to change with minimum of difficulty)						
2. Emotional control (Expresses and displays emotions appropriately; emotional outbursts rarely occur)						
3. Openness to experience (Appears to be receptive to new tasks or experiences; seems able to take reasonable risks; can respond naturally to unusual or unexpected stimuli)						
4. Enthusiasm (Enters into most activities with eagerness and wholehearted participation; maintains enthusiasm for duration of activity)						
5. Self-acceptance (Seems to understand and accept self; able to view self in terms of both limitations and abilities)						
6. Independence (Behavior usually is dictated by his own set of values; is concerned with the freedom to express ideas and feelings)						
7. Conformity (Behavior is influenced by expectancies and desires of others)	Influence of adults					
	Influence of peers					
8. Anxiety over achievement (Seems anxious about achievement; worried or concerned about schoolwork or the impression any performance makes on others)						
9. Competitiveness (Has high standards for performance, usually desiring to do as well or better than peers)						
10. Dominance (Asserts self with influence in a group situation)						
11. Aggressiveness (Acts with apparent intent to hurt others)						

12. Describe any emotional immaturity or other personality characteristic which could hinder this child's development:

Teacher Recommendation

After this careful consideration of the child's intellectual, physical, social, and emotional development, do you think he or she could profit from participation in

____?

Yes ____ No ____

Do you recommend that the child be placed in ________________________________?

Yes ____ No ____

What reasoning have you used in making this decision? ________________________________

____

____

____

____

In view of this case study record, check which type(s) of program(s) would be most appropriate for this pupil:

Enrichment in regular classes	________
Courses by mail or special tutoring	________
Advanced classes (acceleration)	________
Attend college classes	________
Special counseling or instruction outside of regular classes	________
Special classes organized for gifted pupils	________

What specific suggestions can you make for curriculum experiences and relationships which will meet this individual child's needs?

____

____

____

____

____

____

Signed: ________________________

Date ______________________

Appendix A -- Continued

CASE STUDY FORMAT

Part IV
PARENT INVENTORY

Pupil's name ______________________ Date ______________________

School ______________________ Grade ______________________

Birthdate ______________________

---

1. Summary of Child's School Experience

Location	Dates	Grades	Age

2. Parental Background

Type of information	Father	Mother
Educational level completed		
Occupation		
Special interests and aptitudes		

3. Description of Family Unit (marital status, step-parents, other adults in home, and the like)

4. Significant Conditions or Stresses Which Might Influence School Performance

5. Description of Early Indications of Superior Ability (e. g., speech, interests, physical development)

6. Activities in Which Family Engages

Activity	Little	Moderate	Much
Taking trips			
Attending concerts			
Visiting museums			
Visiting art galleries			
Attending plays			
Picnicking			
Going to movies			
Visiting friends			
Attending lectures			
Camping			
Fishing			
Hunting			
Boating			
Swimming			
Other sports ( )			
Other activities ( )			

7. Describe any problems your child has had (e. g., speech, emotional, hearing):

8. Describe any important aspect of the pupil's health or physical development which might affect participation in a challenging educational program (serious illnesses or handicaps):

9. What special talents or skills do you feel your child has?

10. What examples can you give of your child's creative productivity?

11. What are your child's vocational aspirations?

12. What are your educational and vocational expectancies for your child?

13. Child's reading interests (favorite books, type of book):

14. Reading materials available for child's use (e.g., encyclopedias, magazines):

15. Amount of child's reading per week (estimate):

16. What special lessons, training, or learning opportunities does your child have outside of school?

17. Child's hobbies and special interests (e.g., collections, dancing, making models, swimming, singing, painting, cooking, sewing, drama):

18. Discuss your child's attitude toward school (e. g., activities enjoyed or disliked, enthusiasms, criticisms, relations to adults): ______________________________

19. What kinds of development do you feel are most important for your child? ______________

20. What suggestions can you give for meeting your child's needs in school? ______________

Check the following items from 1 (little) to 5 (much) as best describes your child as you see him or her.

Item to be evaluated		Little 1	2	Moderate 3	4	Much 5
21. Enjoyment of school (Enjoys academic pursuits and assignments; likes school)						
22. Persistence (Ability and desire to follow through on work; concern with completion; ability to see a problem through)	In own interests					
	In assigned tasks					
23. Intellectual curiosity (Pursues interests primarily to understand or satisfy curiosity; questions the common, ordinary, or the unusual; wants to know how and why; generates questions of his own--in connection with personal interests or group concerns)						
24. Perceptiveness (Is alert, perceptive, and observant beyond his years; aware of many stimuli)						
25. Fluency (Produces a large number of ideas or products, often very quickly)						
26. Flexibilty (Able to approach ideas and problems from a number of perspectives; adaptable; able to find alternative ways of solving problems)						
27. Sensitivity to problems (Perceives and is aware of problems and inconsistencies that others may not see; is ready to question or change existing situations and suggest improvements)						

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
28. Originality (Often uses original methods of solving problems, is able to combine ideas and materials in a number of ways, or creates products of unusual character or quality)					
29. Imagination (Can freely respond to stimuli with the production of mental images; may "play" with ideas or produce remote, fanciful associations or insights)					
30. Elaboration (Concerned with detail and complexity; often involved with a variety of implications and consequences)					
31. Aesthetic appreciation (Enjoys and is responsive to beauty in the arts or nature)					
32. Independence in thought (Inclined to follow his own organization and ideas rather than the structuring of others)					
33. Independence in action (Able to plan and organize activities, direct action, and evaluate results)					
34. Physical expression (Indicates that physical activities are a comfortable, enjoyable area for self-expression)					
35. Physical ability (Coordination, timing, agility, and ability to participate satisfactorily in organized games)					
36. Energy level (Has available resources of pep and vigor for carrying on most activities)					
37. Popularity (Others seem to enjoy and want to be with this child; frequently seen interacting with others in a social, friendly manner)					
38. Acceptance of others (Relates to others with genuine interest and concern; enjoys others; seeks them out; shows warmth)					
39. Social maturity (Able and willing to work with others; can "give and take"; is sensitive to the needs and feelings of others; shows consideration; observes rules of social conduct)					
40. Sense of humor (Ability to laugh at himself; gets enjoyment and pleasure from lighter moments in school day; laughs easily and comfortably)					
41. Happy qualities (Seems self-confident, happy, and comfortable in most situations; usually has a cheerful, pleased, or satisfied look on his face; does not seem to worry too much)					
42. Emotional stability (Is able to cope with normal frustrations of living; adjust to change with minimum of difficulty)					
43. Emotional control (Expresses and displays emotions)					

Item to be evaluated	Little 1	2	Moderate 3	4	Much 5
44. Enthusiasm (Appears enthusiastic about life; enters into most activities with eagerness and wholehearted participation)					
45. Self-acceptance (Seems to understand and accept self; able to view self in terms of both limitations and abilities)					
46. Independence (Behavior usually is dictated by his own set of values; is concerned with the freedom to express ideas and feelings)					
47. Dominance (Asserts self with influence in group situations)					
48. Aggressiveness (Frequently acts with apparent intent to hurt others)					

- -

Parental Permission

School____________________

Date_____________________

If you are in agreement with the recommendations made for your child,

________________________________, and wish him/her to participate in the

________________________________Program, please sign below.

Signature__________________________

Reason for granting permission:____

____

____

____

____

Appendix A--Continued

CASE STUDY FORMAT

Part V
ADDITIONAL RESOURCES AND INSTRUMENTS

Intellectual Processes Rating Scale[1]

Name ______________________ Birthdate ______________ Grade _____

Teacher ______________________ District ______________ Date _______

Rate each statement by putting an X in the appropriate square after the statement. The squares are numbered 1 to 5 and represent the degree to which you have noticed the described intellectual process. The bases for making a judgment are given as follows:

1. You have not noticed this process.
2. You have noticed this process to a slight degree.
3. You have noticed this process to a considerable degree.
4. You have noticed this process to a large degree.
5. You have noticed this process to a very large degree.

Intellectual Processes

Item to be evaluated	Rating scale				
	1	2	3	4	5
1. Cognition (The process of discovery, rediscovery, recognition, comprehension, and understanding)					
2. Memory (The retention of information in any form accumulated through in-school and out-of-school experiences)					
3. Convergent production (The production of information from given information where the emphasis is upon achieving conventionally accepted or best outcomes)					
4. Divergent production (The production of information from given information where the emphasis is upon a variety of ideas from the same source)					
5. Evaluation (To reach decisions or make judgments concerning the goodness--correctness, suitability, adequacy, desirability--of information in terms of criteria of identity consistency and goal satisfaction)					
Subtotals (number of Xs in each column)					
Total for all columns: . . . . ______					

---

[1] Adapted by Marcella Bonsall from J. P. Guilford and P. R. Merrifield, "The Structure of Intellect Model: Its Uses and Implications," Reports from the Psychological Laboratory, No. 24. Los Angeles: University of Southern California, April, 1960.

Rating Scale for Development of Intellectual Abilities and Skills[2]

Name ______________________ Birthdate ________________ Grade _____

Teacher ______________________ District ________________ Date _____

Rate each statement by putting an X in the appropriate square after the statement. The squares are numbered 1 to 5 and represent the degree to which you have noticed the described intellectual ability and skill. The bases for making a judgment are given as follows:

1. You have not noticed this intellectual ability and skill.
2. You have noticed this intellectual ability and skill to a slight degree.
3. You have noticed this intellectual ability and skill to a considerable degree.
4. You have noticed this intellectual ability and skill to a large degree.
5. You have noticed this intellectual ability and skill to a very large degree.

Intellectual Abilities and Skills

Item to be evaluated	Rating scale				
	1	2	3	4	5
1. Knowledge is finding in a task or problem the appropriate signals, cues, and clues which will bring out stored knowledge.					
a. Knowledge of specifics (To recall specific and isolable bits of information--very low level of abstraction)					
b. Knowledge of terminology (To know the referents most appropriate to a given use of specific verbal and nonverbal symbols)					
c. Knowledge of specific facts (To know dates, events, places, and the like, with precision or approximation)					
d. Knowledge of ways and means of dealing with specifics (To be aware of organizing, studying, judging, and criticizing patterns of organization)					
e. Knowledge of conventions (To be conscious of the characteristic way of treating and presenting ideas and phenomena)					
f. Knowledge of trends and sequences (To know the processes, directions, and movements of phenomena with respect to time)					

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[2] Adapted by Marcella Bonsall from (1) Benjamin S. Bloom and D. R. Krathwohl, Taxonomy of Educational Objectives. 2 books. New York: David McKay Co., Inc., 1956, 1964; and (2) "Test-Item Folio No. 1" and Section III Appendices, Questions and Problems in Science. Princeton, N. J.: Educational Testing Service, 1956.

Intellectual Abilities and Skills (continued)

Item to be evaluated	Rating scale 1	2	3	4	5
g. Knowledge of classifications and categories (To know of the fundamental classes, sets, divisions, and arrangements of a purpose, a problem, and the like)					
h. Knowledge of criteria (To be aware of the criteria by which facts, principles, opinions, and conduct are tested or judged)					
i. Knowledge of methodology (To be aware of the methods of inquiry, techniques, and procedures employed in investigating phenomena)					
j. Knowledge of the universals and abstractions in a field (To know the major ideas, schemes, and patterns by which phenomena and ideas are organized--highest form of abstraction and complexity)					
k. Knowledge of principles and generalizations (To recognize the abstractions which are of value in explaining, describing, predicting, or determining the most relevant action or direction to be taken)					
l. Knowledge of theories and structures (To know the body of principles and generalizations together with their interrelations which present a clear, rounded, and systematic view of a complex field--most abstract formulations)					
2. Comprehension is knowing what is being communicated and using the idea even though not perceiving the fullest implications.					
a. Translation (To paraphrase, to render, or to alter the form of the original communication with accuracy)					
b. Interpretation (To explain or summarize the communication by reorganization or rearrangement)					
c. Extrapolations (To extend the given data to determine implications, consequences, corollaries, effects, and the like in accordance with the original communication)					
3. Analysis is breaking down a communication into its elements or parts to clarify the hierarchy or the relation of ideas.					
a. Analysis of elements (To distinguish between facts and hypotheses and to recognize unstated assumptions)					

Intellectual Abilities and Skills (continued)

	Rating scale				
Item to be evaluated	1	2	3	4	5
b. Analysis of relationships (To recognize the connections and interactions between elements and parts of a communication)					
c. Analysis of organizational principles (To recognize the form, pattern, and structure, both explicit and implicit, which make the communication a unit)					
4. Synthesis is putting together elements and parts into a whole pattern or structure not clearly there before.					
a. Production of a unique communication (To communicate ideas, feelings, and experiences of others)					
b. Production of a plan or proposed set of operations (To develop a plan of work or a proposal of a plan of operations that satisfies the requirements of the task)					
c. Derivation of a set of abstract relations (To develop a set of abstract relations either to classify or explain phenomena, or to deduce propositions or relations from a set of basic propositions or symbolic representatives)					
5. Evaluation is judging the value of purposes, ideas, methods, and the like, involving criteria as well as standards of appraisal.					
a. Judgments in terms of internal evidence (To evaluate the accuracy of a communication by the logical relationships evident in it)					
b. Judgments in terms of external criteria (To evaluate the material with reference to selected or remembered criteria)					
Subtotals (number of Xs in each column)					

Total for all columns . . . . ________

Section totals					Final Total
Knowledge	Comprehension	Analysis	Synthesis	Evaluation	

Appendix A -- Continued

CASE STUDY FORMAT

Part VI
TEACHER AND PUPIL RATING SCALES

Teacher Rating

Pupil ______________________ Rated by ______________________

Grade ______________________ Date ______________________

Motivational Characteristics

Check the following items according to what best describes your observation of the child's motivation and satisfaction.

Characteristic to be evaluated	Little 1	2	Moderate 3	4	Much 5
Seeks to gain status socially					
Seeks to gain status academically					
Seeks to gain status athletically					
Seeks to gain affection from peers					
Seeks to gain affection from adults					
Finds satisfaction via peer relationships					
Finds satisfaction via adult relationships					
Finds satisfaction via popularity					
Finds satisfaction via being a good athlete					
Finds satisfaction via following own interests					
Finds satisfaction via being a good student					

Check the following activities according to your observations of the child's (1) enjoyment and (2) freedom of expression.

Activity	Enjoyment					Freedom of Expression				
	Little 1	2	Moderate 3	4	Much 5	Little 1	2	Moderate 3	4	Much 5
Writing										
Music										
Art										
Speaking										
Dance or physical activities										
Drama										
Construction or manipulation										
Other										

Pupil Rating

Name ______________________________ Date ______________________________

Subject Areas and Activities

Check (1) the column which best describes the amount of interest you have in the following subjects or activities; and (2) the level at which you feel you perform in each (judged either by grades or quality of products).

Subject areas and activities	Interest					Performance				
	Little		Moderate		Much	Low		Average		High
	1	2	3	4	5	1	2	3	4	5
Art										
Construction or manipulation (making things with hands)										
Dramatic expression (being in plays, acting)										
Language arts Foreign language										
Handwriting										
Oral expression (speaking)										
Spelling										
Reading										
Written expression (stories, poems, compositions)										
Mathematics										
Music										
Physical activities (sports, dance)										
Science										
Social science										

Check the following items for (1) the amount of enjoyment you feel with each activity; and (2) how free you feel about expressing yourself in each one.

Subject areas and activities		Enjoyment					Freedom of Expression				
		Little		Moderate		Much	Little		Moderate		Much
		1	2	3	4	5	1	2	3	4	5
Writing											
Music	Singing										
	Instrument										
Art											
Speaking											
Dance or Physical activities											
Drama (acting, being in plays)											
Construction or manipulation (making things with hands)											
Other activities you enjoy											

Pupil Inventory

Pupil's name ______________ ______________________

Date ____________________

1. Feelings about being in special educational program		
2. Areas and skills which are easiest in school		
3. Areas and skills which are hardest in school		
4. Things enjoyed most		
5. Things not enjoyed (areas disliked or in which change is desired)		
6. Areas or activities in which greatest progress is felt		
7. Preference for working conditions (e. g., alone, with others, long periods, where)		
8. Sports and games (e. g., what activities, evaluation of progress, with whom)	In school	
	Out of school	
9. Use of free time (e. g., activities, with whom)	At school	
	At home	

10. Areas in which "creative" products and freedom of expression are especially enjoyed (e. g., writing, music, art, speaking, dance--physical, drama, construction--manipulative)	
11. Hobbies and favorite recreation	
12. Lessons out of school--special opportunities	
13. Television habits Types of programs preferred	
Frequency of viewing	
14. Reading habits Kinds of materials preferred	
Amount of time spent	
15. Special responsibilities or jobs out of school	
16. Clubs and organizations (e. g., special friends who belong, activity leadership role, offices held or desired)	
17. Activities in which family participates as a group	
18. Possible vocational choices	
19. Educational ambitions	
20. Possible goals for the year	
21. Problems encountered	

Name ______________________________ School ______________________

Date ______________________________ Grade ______________________

Value Rankings

One of the ways in which people differ is that they may have different values. The things people feel are important in life are their values. What do you value most? And why?

Rank the following sections in order of their importance to you: (1) first choice; (2) second choice, and the like. Try to give reasons for your highest choices (e. g., what benefits you may receive, what you particularly enjoy). Remember that there are no right or wrong answers. Order them as you really feel, not just as you think others might expect you to respond.

Items	Rank	Reasons
1. Being a good athlete		
Being a good student		
Being popular		
Being one who understands and accepts other people		
2. Having others know you are very sociable and know how to get along with people		
Showing others how intelligent you are		
Having others know you are especially understanding and have deep feelings		
Having others know you are outstanding in some physical ability		
3. Being warm and understanding		
Having above-average intelligence		
Being attractive or good-looking (build, features, and the like)		
Being easy to get along with		
4. How would you like most to be remembered after you leave school?		
As a good student		
As an outstanding athlete		
As a school leader		
As a kind, understanding person		

Items	Rank	Reasons
5. Doing what adults expect		
Deciding for yourself what you will do		
Getting approval from adults for what you do		
Deciding for yourself how well you have done things		
Getting approval from your friends in what you do		
6. Enjoying working with mechanical or scientific things		
Enjoying abstract or mathematical problems		
Enjoying nature (e. g., stars, rocks)		
Enjoying living things (e. g., insects, butterflies, animals, pets)		
Enjoying "losing yourself" in a good book or in imagination		
Enjoying being with your family		
Enjoying studying about people (what they are like and why they are the way they are)		

7. If you could have a real friend of ideal qualities and values, what would this person be like?

What age would this person be? ______

Would this person be male or female? ______

Whom would this person be most like that you now know? ____________________

What would be the most important qualities this person would have?
(List these in order of importance.)

Name ________________________________ School ____________________

Date ________________________________ Grade ____________________

Preferences for Working Conditions

Check the following items to indicate your preferences for working conditions. Give the reasons why you checked the columns as you did.

Working condition	Little		Moderate		Much	Reasons
	1	2	3	4	5	
Alone						
With friends						
In small groups						
In large groups						
Long work periods						
Short work periods						
At home						
At library						
At school						

My Ideal Classroom

If you had your choice and [illegible] set up an ideal classroom, what would it be like? (Include how it would be organized, the way people would behave, kinds of materials and equipment available, ideal teacher, special activities, etc.)

Children's Writings

Children's own words can be a rich source of information about their self-concepts, values, desires, and goals. In addition, their writing can provide insight into the kinds of problems children face.

Guidance-oriented writing assignments spaced throughout the year can provide a firsthand account of the growth and development of children. An outline follows of six assignments of this type, with appropriate instructions and a time schedule for the teacher:

1. Goals for the School Year (Start of school year)

   Suggested instructions:

   "We have had our vacations, and we are starting a new school year. Every once in a while, people ought to give some serious thought to the future. This is a good time to ask ourselves, 'What do we want to accomplish in the coming year? What would we like most to have happen this year?' Explain your thinking or desires as clearly and completely as you can. Make your title 'My Goals for the School Year' or think of an original title to express this topic."

2. Autobiography (Early fall)

   Suggested instructions:

   "If teachers understand their students, they can do a better job of teaching. I would like to know more about each one of you. You need lots of experience with writing. People generally can write with ease about things that are important to them. I have an assignment which can help both of us.

   "If you write an autobiography, it will give you experience with writing, and it will help me get better acquainted with each one of you. Since you are an 'expert' on yourself, this should be an easy assignment.

   "I would like you to include the following kinds of information, plus anything else you feel would be important or interesting, anything which you feel might have had an important influence on your life:
   a. Your position in the family
   b. Events of importance in your early life
   c. Early childhood experiences you remember most vividly
   d. School history
   e. Kind of person you are now
   f. Things you enjoy most and things you do not enjoy
   g. Kind of person you would like to become
   h. What you would like most to do in life

   (Either place the above list on the board or duplicate it as an assignment sheet.)

   "I suggest you make an outline before you begin. You might list subpoints under each of the eight main topics. These could be reminders for paragraphs. You may include conversation; descriptions of important places, persons, or objects; and exciting incidents. Make it as complete and interesting as you possibly can."

3. Three Wishes (Late fall)

   Suggested instructions:

   "If you had three wishes and a choice of anything in the world, what would you want most? Describe each of these in a separate paragraph in the order of choice. Your title will be 'Three Wishes.'"

(This can be done in one period. Try to eliminate all communication. Do not give examples which they might copy. Although Christmas is coming, try to encourage them to consider things other than gifts they might receive at Christmas.)

4. Problems of People My Age (Winter)

Suggested instructions:

"Teachers sometimes need help in understanding their students better. Being older, adults have grown up in a different time and under different conditions. They probably had to face slightly different problems as they grew older. What kinds of problems do people your age have to face today? What are the most difficult problems which must be met? What kinds of help do you feel people your age need most? Write a paper on 'Problems of People My Age.' You may include any problems which you have experienced."

5. How I Have Changed Since Last Summer (Early spring)

Suggested instructions:

"Change is one of the things we will see all through life--change in the world around us, in the people we know, and in ourselves. I can see many changes in each of you since the start of the school year. What changes do you see in yourselves? Write on the topic 'How I Have Changed Since Last Summer.' This may include any kind of change--in looks, physical ability, feelings, attitudes, problems you meet, ways of thinking, habits, and the like. It does not have to be a big, dramatic change; change usually occurs gradually. Try to think of all the things about yourself which you feel are somewhat different from what they were last summer."

6. The Past School Year (End of school year)

Suggested instructions:

"The school year is almost behind us. Just as it is important to look ahead to the future, so it is valuable to stop to look back occasionally and ask, 'What progress have I made? What have I accomplished? What have I not done that I had hoped to do? What has made me the happiest? What do I value most about this year of my life?' Make this more thoughtful than any writing you have done so far. It may give you some clues as to what you would like to concentrate upon next year. Your title may be 'The Past School Year,' or it may be something original which conveys this idea."

Anecdotal Records

A file of anecdotal record cards kept in chronological order can provide valuable data for determining behavior change over a period of time, in a variety of situations, and through the eyes of multiple observers. The following is a sample of a card for use in making such observations:

Name ______________________ Teacher ______________________

School ______________________ Date _________ Time ___________

Recorded by ____

Activity ____

Description of behavior:

If the teacher has ample cards easily available, he can make brief notes during a class period and complete the description when he has more time. An event should be described specifically as: "He knocked Mary's books to the floor," "He picked Mary's books up for her," or "He talked to Jim during study period when instructions had been given to work independently." Observations should be made to show the child's interactions in many situations. Contrasting and comparing such data can provide valuable insights into characteristic behavior patterns. Since people tend to perceive somewhat selectively, it is wise to have anecdotal records made by as many adults in the school environment as possible.

To have such records typed periodically and filed with other case study data would be helpful in setting up goals and programs for individual children or appraising their development. Categories such as the following might be established:

- Classroom behavior
- Behavior with adults
- Behavior with special friends
- Behavior with large groups of children
- Behavior with small groups of children
- Playground behavior
- Behavior in different subject areas
- Unusual achievements
- Evidence of learning characteristics
- Accounts of learning difficulties
- Areas avoided
- Use of free time
- Evidence of special interests
- Significant comments

The simplest way to analyze anecdotal records probably would be to develop a color code for desired categories. Underlining key descriptions would facilitate interpretation.

Appendix A -- Continued

CASE STUDY FORMAT

Part VII
TEACHER SUMMARY

Pupil's name ______________________________

What SPECIAL PROVISIONS have been made to meet this pupil's INDIVIDUAL NEEDS; e. g., enrichment, individual project, acceleration, special class, counseling?

Grade	Entry by	Date

What CHANGES have you seen in this PUPIL since the start of the year; e. g., attitudinal, behavioral, appearance, functioning?

Grade	Entry by	Date

What RECOMMENDATIONS can you make for CURRICULUM PLANNING designed to meet this pupil's INDIVIDUAL NEEDS?

Grade	Entry by	Date

Appendix B

CHECKLIST FOR SCREENING MENTALLY GIFTED PUPILS

First Grade

Date ________________

Pupil's name ______________________ Birthdate ______________________

School ______________________ Teacher ______________________

Note: Since superior pupils exhibit their superiority in many ways, no single test score should be used as the sole criterion upon which such pupils should be identified. Teachers' judgments, evidence of a high level of performance in any of the academic fields, and evidence of high motivation coupled with high test scores can all be used in the identification of potentially superior students.

Check if in evidence:

____ 1. Large vocabularies which are used easily and accurately
____ 2. Asks many penetrating questions; wants to know causes and reasons for things
____ 3. A wide range of interests, but may concentrate heavily on one
____ 4. Quick to recognize relationships and understand meanings
____ 5. Expresses himself well
____ 6. Is willing to spend time beyond the usual assignments or schedule on things that interest him
____ 7. Spends much time on special projects of his own, such as constructing, collecting, and writing
____ 8. Tendency to figure out what is wrong with an activity and show how it can be done better
____ 9. Tendency to give refreshing twists even to old ideas
____10. Likes to get answers to problems, puzzles, and trick questions
____11. Usually gets good marks
____12. Shows less patience than most pupils with routine procedures and drills
____13. Other pupils tend to turn to him for ideas and suggestions when something must be decided
____14. Likes to read and find satisfaction in thinking about and discussing what has been read

Check the items which describe this pupil's performance in the subjects listed:

Arithmetic

___ No interest
___ Uses simple counting
___ Understands simple processes
___ Understands and uses complex processes

Art

___ Meaningless production
___ Representation (child interpreted)
___ Meaningful representation (simple)
___ Detailed, complex representation

Language Arts

___ No contribution
___ Contributes occasionally
___ Contributes better ideas than most
___ Dictates detailed stories individually

Music

___ Little participation
___ Participates on level of class
___ Use of original, creative ideas

Science

___ No participation
___ Works at level of class
___ Contributes better ideas than most
___ Contributes to class through independent research

Social Sciences

___ No participation
___ Works at level of class
___ Contributes better ideas than most
___ Contributes to class through independent research

Comments: ____

Appendix C

PRELIMINARY CONSIDERATION OF PLACEMENT OF GIFTED PUPIL IN ACCELERATION PROGRAM

______________________ Date

Pupil's name ______________________ Grade __________ Birthdate __________

School ______________________ Teacher ______________________

TEST DATA:

Intelligence Tests

Name of Test	Date test taken	IQ

Achievement Tests

Name of test	Date test taken	Score (Grade level or percentile)		
		Reading	Arithmetic	Composite

Other Matters to Be Considered

Matter to be evaluated	Well above average	Above average	Average	Below average
Size relative to age				
Emotional stability				
Academic motivation				
Work habits				
Creativity, originality				

Matter to be evaluated	Well above average	Above average	Average	Below average
Gets along with others				
Attendance				
Health				
Energy				
Home interest in child's school progress				
Reading comprehension				
Word attack skills				
Arithmetic concepts and problem-solving ability				
Arithmetic computation				
Spelling				
Handwriting				
Speech and vocabulary				

Parent attitude toward acceleration for this child: ☐ Favorable ☐ Unfavorable

Comments: ____

Appendix D

ACCELERATING PUPIL'S PROGRESS REPORT

Elementary School

Pupil's name ____________________ Date __________ Teacher ____________________

	Excellent	Good	Fair	Poor
Reading Comprehension				
Fluency				
Handwriting				
Arithmetic Problem solving				
Processes				
Spelling: In independent work . . .				
Assigned words.				
Language Written				
Oral				
Work habits (Includes				
self-direction, finishing work on time, following directions, and listening)				

Emotional adjustment:

____

____

____

Additional comments:

____

____

____

Teacher ____________________

Principal ____________________

Appendix E

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